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## I. STATUS OF CLAIMS

Claims 1-180 are pending.

Claims 108-128 and 154-178 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. *See Examiner's Office action*, p. 3 (04 September 2007).

Claims 154-178 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. *See Examiner's Office action*, p. 4 (04 September 2007).

Claims 19, 36, 37, 45-47, 67, 84, and 85 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. *See Examiner's Office action*, p. 5 (04 September 2007).

Claims 179 and 180 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Mulgund *et al.* (2002/0161751). *See Examiner's Office action*, p. 7 (04 September 2007).

Claims 1, 98-101, 104, 105, 108, 119-122, 125, 126, 129, 144-147, 150, 151, 154, 169-172, 175, and 176 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* (U.S. Patent No.: 5,615,367).

Claims 2-97, 109-118, 130-143, and 155-168 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. *See Examiner's Office action*, p. 11 (04 September 2007).

Claims 102, 103, 106, 123, 124, 127, 148, 149, 152, 173, 174, and 177 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/01611651) in view of Bennett *et al.* and in further view of Nelson (2004/0122849). *See Examiner's Office action*, p. 13 (04 September 2007).

Claims 107, 128, 153, and 178 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/01611651) in view of Bennett *et al.* and in further view of "TAG: a Tiny Aggregation Service for Ad-Hoc Sensor Networks" by Samuel Madden *et al.* *See Examiner's Office action*, p. 13 (04 September 2007).



## **II. ISSUES TO BE REVIEWED**

The issues in this response relate to whether the art of record establishes a *prima facie* case of the unpatentability of Applicant's Claims 1-180. For reasons set forth elsewhere herein, Applicant respectfully asserts that the art of record does not establish a *prima facie* case of the unpatentability of any pending claim. Accordingly, Applicant respectfully requests that Examiner hold all pending Claims 1-180 allowable for at least the reasons described herein, and issue a Notice of Allowability on same.

## **III. ARGUMENT: ART OF RECORD DOES NOT ESTABLISH *PRIMA FACIE* CASE OF UNPATENTABILITY IN VIEW OF CITED ART OF RECORD**

The Office action states, "Claims 108-128 and 154-178 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter." *See Examiner's Office action*, p. 3 (04 September 2007).

Further, the Office action states, "Claims 154-178 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement." *See Examiner's Office action*, p. 4 (04 September 2007).

Further, the Office action states, "Claims 19, 36, 37, 45-47, 67, 84, 85 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." *See Examiner's Office action*, p. 5 (04 September 2007).

Further, the Office action states, "Claims 179 and 180 are rejected under 35 U.S.C. 102(b) as being anticipated by Mulgund et al. (2002/0161751)." *See Examiner's Office action*, p. 7 (04 September 2007).

Further, the Office action states, "Claims 1, 98-101, 104, 105, 108, 119-122, 125, 126, 129, 144-147, 150, 151, 154, 169-172, 175, and 176 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367)." *See Examiner's Office action*, p. 8 (04 September 2007).

Further, the Office action states, "Claims 2-97, 109-118, 130-143, and 155-168 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett et al. and in further view of other references used to reject corresponding claims of the co-pending

applications (the listing of additional references is not provided here for clarify, but is provided in the Notice of References Cited)." *See Examiner's Office action*, p. 11 (04 September 2007).

Further, the Office action states, "Claims 102, 103, 106, 123, 124, 127, 148, 149, 152, 173, 174, and 177 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett et al. and in further view of Nelson (2004/0122849)." *See Examiner's Office action*, p. 13 (04 September 2007).

Still further, the Office action states, "Claims 107, 128, 153, and 178 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett and in further view of "TAG: a Tiny Aggregation Service for Ad-Hoc Sensor Networks" by Samuel Madden et al." *See Examiner's Office action*, p. 15 (04 September 2007).

In response, Applicant respectfully asserts herein that, under the MPEP and legal standards for patentability as set forth below, the art of record does not establish a *prima facie* case of the unpatentability of Applicant's claims at issue. Specifically, Applicant respectfully shows below that the art of record does not show or suggest the recitations of Applicant's claims at issue, and hence fails to establish a *prima facie* case of unpatentability. Accordingly, Applicant respectfully requests that the Examiner withdraw his rejections and hold all claims to be allowable over the art of record.

#### **A. MPEP Standards for Patentability<sup>1</sup>**

The MPEP states as follows: "the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability. If that burden is met, the burden of coming forward with evidence or argument shifts to the applicant. . . If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent." *MPEP* § 2107 (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992)); *In Re Glaug* 283 F.3d 1335, 62 USPQ2d 1151 (Fed. Cir. 2002) ("During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker*, 977 F.2d 1443, 1445, 24

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<sup>1</sup> Applicant is aware that Examiner is familiar with the MPEP standards. Applicant is merely setting forth the MPEP standards to serve as a framework for Applicant's arguments following and to ensure a complete written record is established. Should Examiner disagree with Applicant's characterization of the MPEP standards, Applicant respectfully requests correction.

U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). If the PTO fails to meet this burden, then the applicant is entitled to the patent.”). Accordingly, unless and until an examiner presents evidence establishing *prima facie* unpatentability, an applicant is entitled to a patent on all claims presented for examination.

### 1. MPEP Standards for Determining Anticipation

An examiner bears the initial burden of factually supporting any *prima facie* conclusion of anticipation. *Ex Parte Skinner*, 2 U.S.P.Q.2d 1788, 1788-89 (B.P.A.I. 1986); *In Re King*, 801 F.2d 1324, 231 U.S.P.Q. (BNA) 136 (Fed. Cir. 1986); *MPEP* § 2107 (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992) (“[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability....”). Failure of an examiner to meet this burden entitles an applicant to a patent. *Id.* (“[i]f examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent”).

The MPEP indicates that in order for an examiner to establish a *prima facie* case of anticipation of an applicant’s claim, the examiner must first interpret the claim,<sup>2</sup> and thereafter show that the cited prior art discloses the same elements, in the same arrangement, as the elements of the claim which the examiner asserts is anticipated. More specifically, the MPEP states that “[a] claim is anticipated *only if each and every element as set forth in the claim is found*, either expressly or inherently described, in a single prior art reference. . . . The identical invention must be shown in as complete detail as is contained in the . . . claim. . . . The elements must be arranged as required by the claim . . . .”. *MPEP* § 2131 (emphasis added). Consequently, under the guidelines of the MPEP set forth above, if there is *any* substantial difference between the prior art cited by an examiner and an applicant’s claim which the examiner asserts is rendered anticipated by the prior art, the prior art does NOT establish a *prima facie* case of anticipation and, barring other rejections, the applicant is entitled to a patent on such claim.

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<sup>2</sup> With respect to interpreting a claim at issue, the MPEP directs that, during examination -- as opposed to subsequent to issue -- such claim be interpreted as broadly as the claim terms would reasonably allow, in light of the specification, when read by one skilled in the art with which the claimed invention is most closely connected. *MPEP* § 2111.

## 2. MPEP Standards for Determining Obviousness

“[T]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness.”<sup>3</sup> *MPEP* § 2142. The MPEP indicates that in order for an examiner to establish a *prima facie* case that an invention, as defined by a claim at issue, is obvious, the examiner must (1) interpret the claim at issue; (2) define one or more prior art reference components relevant to the claim at issue; (3) ascertain the differences between the one or more prior art reference components and the elements of the claim at issue; and (4) adduce objective evidence which establishes, under a preponderance of the evidence standard, a teaching to modify the teachings of the prior art reference components such that the prior art reference components can be used to construct a device substantially equivalent to the claim at issue. This last step generally encompasses two sub-steps: (1) adducement of objective evidence teaching how to modify the prior art components to achieve the individual elements of the claim at issue; and (2) adducement of objective evidence teaching how to combine the modified individual components such that the claim at issue, as a whole, is achieved. *MPEP* § 2141; *MPEP* § 2143. Each of these forgoing elements is further defined within the MPEP. *Id.*

This requirement has been explained recently by the Supreme Court in *KSR v. Teleflex*, 550 U.S. \_\_\_\_; 127 S. Ct. 1727 (2007) which noted that such a rejection requires “some articulated reasoning ... to support the legal conclusion of obviousness.” As stated by the Court, obviousness can be established where “there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, **this analysis should be made explicit.**” (*emphasis added*) See *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”).” *KSR v. Teleflex*, 550 U.S. \_\_\_\_; 127 S. Ct. 1727 at 1741.

As further described by the Court “[A] patent composed of several elements is not **proved obvious merely by demonstrating that each of its elements was, independently, known**

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<sup>3</sup> An invention, as embodied in the claims, is rendered obvious if an examiner concludes that although the claimed invention is not identically disclosed or described in a reference, the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *MPEP* § 2141 (citing 35 U.S.C. § 103).

*in the prior art.* Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *KSR v. Teleflex*, 550 U.S. \_\_\_\_; 127 S. Ct. 1727 at 1741.

**a) Interpreting a Claim at Issue**

With respect to interpreting a claim at issue, the MPEP directs that, during examination -- as opposed to subsequent to issue -- such claim be interpreted as broadly as the claim terms would reasonably allow when read by one skilled in the art with which the claimed invention is most closely connected. In practice, this is achieved by giving each of the terms in the claim the “plain meaning” of the terms as such would be understood by those having ordinary skill in the art, and if portions of the claim have no “plain meaning” within the art, or are ambiguous as used in a claim, then the examiner is to consult the specification for clarification. *MPEP* § 2111.

**b) Definition of One or More Prior Art Reference Components Relevant to the Claim at Issue**

Once the claim at issue has been properly interpreted, the next step is the definition of one or more prior art reference components (*e.g.*, electrical, mechanical, or other components set forth in a prior art reference) relevant to the properly interpreted claim at issue. With respect to the definition of one or more prior art reference components relevant to the claim at issue, the MPEP defines three proper sources of such prior art reference components, with the further requirement that each such source must have been extant at the time of invention to be considered relevant. These three sources are as follows: patents as defined by 35 U.S.C. § 102, printed publications as defined by 35 U.S.C. § 102, and information (*e.g.*, scientific principles) deemed to be “well known in the art”<sup>4</sup> as defined under 35 U.S.C. § 102. *MPEP* § 2141; *MPEP* § 2144.

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<sup>4</sup> The fact that information deemed to be “well known in the art” can serve as a proper source of prior art reference components seems to open the door to subjectivity, but such is not the case. As a remedy to this potential problem, *MPEP* § 2144.03 states that if an examiner asserts that his position is derived from and/or is supported by a teaching or suggestion that is alleged to have been “well known in the art,” and that if an applicant traverses such an assertion

**c)      Ascertainment of Differences between Prior Art Reference  
Components and Claim at Issue; Teaching to Modify and/or  
Combine Prior Art Reference Components to Remedy Those  
Differences in Order to Achieve Recitations of Claim at Issue**

With one or more prior art components so defined and drawn from the proper prior art sources, the differences between the one or more prior art reference components and the elements of the claim at issue are to be ascertained. Thereafter, in order to establish a case of *prima facie* obviousness, an examiner must set forth a rationale, supported by objective evidence<sup>5</sup> sufficient to demonstrate under a preponderance of the evidence standard, that in the prior art extant at the time of invention there was a teaching to modify and/or combine the one or more prior art reference components to construct a device practicably equivalent to the claim at issue.

The preferable evidence relied upon is an express teaching to modify/combine within the properly defined objectively verifiable sources of prior art. In the absence of such express teaching, an examiner may attempt to establish a rationale to support a finding of such teaching reasoned from, or based upon, express teachings taken from the defined proper sources of such evidence (*i.e.*, properly defined objectively verifiable sources of prior art). *MPEP* § 2144; *In re Dembiczak*, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999).

The MPEP recognizes the pitfalls associated with the tendency to subconsciously use impermissible “hindsight” when an examiner attempts to establish such a rationale. The MPEP has set forth at least two rules to ensure against the likelihood of such impermissible use of hindsight. The first rule is that:

under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical “person of ordinary skill in the art” when the invention was unknown and just before it was made. In view of all factual information,<sup>6</sup> the examiner must then make a determination whether the claimed invention “as a

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(that something was “well known within the art”), the examiner must cite a reference in support of his or her position. The same MPEP section also states that when a rejection is based on facts within the personal knowledge of an examiner, the data should be stated as specifically as possible, and the facts must be supported, when called for by the applicant, by an affidavit from the examiner. Such an affidavit is subject to contradiction or explanation by the affidavits of the applicant and other persons. *Id.* Thus, all sources of prior art reference components must be objectively verifiable.

<sup>5</sup> The proper sources of the objective evidence supporting the rationale are the defined proper sources of prior art reference components, discussed above, with the addition of factually similar legal precedent. *MPEP* § 2144.

<sup>6</sup> “Factual information” is information actually existing or occurring, as distinguished from mere supposition or opinion. *Black’s Law Dictionary* 532 (5th ed. 1979).

whole” would have been obvious at that time to that person. Knowledge of an Applicant’s disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the “differences,” conduct the search, and evaluate the “subject matter as a whole” of the invention. The tendency to resort to “hindsight” based upon an Applicant’s disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art:

*MPEP* § 2142 (emphasis added). Thus, if the only objective evidence of such teaching to modify and/or combine prior art reference components is an applicant’s disclosure, no evidence of such teaching exists.<sup>7</sup>

The second rule is that if an examiner attempts to rely on some advantage or expected beneficial result that would have been produced by a modification and/or combination of the prior art reference components as evidence to support a rationale to establish such teachings to modify and/or combine prior art reference components, the *MPEP* requires that such advantage or expected beneficial result be objectively verifiable teachings present in the acceptable sources of prior art (or drawn from a convincing line of reasoning based on objectively verifiable established scientific principles or teachings). *MPEP* § 2144. Thus, as a guide to avoid the use of impermissible hindsight, these rules from the *MPEP* make clear that absent some objective evidence, sufficient to persuade under a preponderance of the evidence standard, no teaching of such modification and/or combination exists.<sup>8</sup>

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<sup>7</sup> An applicant may argue that an examiner’s conclusion of obviousness is based on improper hindsight reasoning. However, “[a]ny judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant’s disclosure, such a reconstruction is proper.” *MPEP* § 2145(X)(A) (emphasis added).

<sup>8</sup> *In Re Sang Su Lee* 277 F.3d 1338 (Fed. Cir. 2002) (“When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness.”) *See, e.g., McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001, 1008 (Fed. Cir. 2001) (“the central question is whether there is reason to combine [the] references,” a question of fact drawing on the *Graham* factors). “The factual inquiry whether to combine references must be thorough and searching.” *Id.* It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. *See, e.g., Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000) (“a showing of a suggestion, teaching, or motivation to combine the prior art references is an ‘essential component of an obviousness holding’”) (quoting *C.R. Bard, Inc., v. M3 Systems, Inc.*, 157 F.3d 1340, 1352, 48 U.S.P.Q.2d 1225, 1232 (Fed. Cir. 1998)); *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999) (“Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.”); *In re Dance*, 160 F.3d 1339, 1343, 48 U.S.P.Q.2d 1635, 1637 (Fed.

**B. Technical Material Cited by Examiner Does Not Show/Suggest Recitations of Independent Claim 1 and Dependent Claims 2-107, Independent Claim 129 and Dependent Claims 130-153, Independent Claim 179, and Independent Claim 180 as Presented Herein; Notice of Allowability of Same Respectfully Requested**

**1. Independent Claim 1**

Claim 1 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 1.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of notes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of notes;
  - creating one or more second-administered content indexes for a second set of notes;
  - obtaining at least a part of the second-administered content indexes of the second set of notes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

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Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988) (“teachings of references can be combined only if there is some suggestion or incentive to do so.”) (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984)). The need for specificity pervades this authority. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed”); *In re Rouffet*, 149 F.3d 1350, 1359, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998) (“even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.”)).



In support of the rejection, the Office action at page 8 recites:

As to claim 1, Mulgund shows:

creating one or more content indexes for a set of notes [building a database model by updating relational database logical design tables at each step of the discovering step (paragraph 0007)] (similarly to claim 1 of the co-pending application 10/816,375 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 2, 2007);

obtaining at least a part of the one or more content indexes of the set of notes [visiting a node and retrieving the information stored at the node] (paragraph 0062)] wherein information is retrieved from a knowledge base (18) at a node (paragraph [0026 lines 11-17) and used to form a relational database (Fig. 3 and Fig. 4).

It is being noted that, based on the current specification, the step of creating and obtaining is performed in essentially the same fashion for both first-administered and second-administered content indexes as well as for the first and second set of notes.

As a result, a pure repetition of creating and obtaining steps for first and second sets of notes is redundant, as it does not further limit the claim. Mulgund shows a first and second-administered content indexes for corresponding first and second sets of notes (Figs. 1, 3, and 4).

Mulgund shows creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes (abstract, paragraph [0005] and [0025], Fig. 3, Fig. 4).

Alternatively, Bennett shows creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes [creating a design document from a first and second tables] (summary of the invention, Fig. 5A).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund by creating a federated index explicitly from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes in order to aggregate information from first and second indexes [tables] into a relational database (abstract, in Bennett).

Mulgund at paragraph [0007] recites:

[0007] In another aspect, the present invention is a method of database modeling that makes it possible to create, store, and update a virtual model of a network of sensors within a relational database structure. The network modeling agent dynamically updates various sensor node data and link data that collectively define an instantaneous "state" of the sensor network into the database logical design. The network modeling agent thereby facilitates access, visualization, and the use of a stream of information generated by the network of distributed sensors. The sensor nodes to be interrogated by the network modeling agent are assumed to be uniquely addressable and in communication, using networking protocols, with one another through links and with a database server through one or more access points. A method according to the present invention comprises the steps of discovering and maintaining the distributed sensor network topology by applying at every access point a quasi-recursive algorithm, which causes the network modeling agent to visit a first sensor node and mark the first node visited, push the marked first node onto a stack, and while the stack is non-empty, query the node at the top of the stack for a list of current links to the node at the top, compare the list of current links to a list of historical links to the node at the top of the stack and update the historical link and historical node information, and if there are no unmarked nodes reachable from a current link then pop the stack, otherwise visit the next reachable unmarked node, mark the next node and push it onto the stack. The network modeling agent builds the database model by updating relational database logical design tables at each step of the discovering step. The agent maintains the database model by periodically reapplying the interrogating algorithm, thereby updating the database model to account for sensor node and link additions and deletions. The periodicity of updates is preferably such that a near real-time topology of the sensor network is maintained.

Mulgund at paragraph [0062] recites:

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

Mulgund at paragraph [0026], lines 11-17, recites:

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general

sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Mulgund at the Abstract recites:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of a traversal and interrogating network modeling agent. The distributed sensors nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

Mulgund at paragraph [0005] recites:

[0005] The tools needed to implement the vision of seamless, global access to remote information are available only in part, and not yet as an integrated package. The Applicants describe below the development of an information architecture, which is referred to in certain embodiments as Intelemetric™, and a method of using the architecture which make it possible to aggregate, store, process, and distributed, real-time distributed sensor data into the enterprise, and make resulting information readily available over the Internet.

Mulgund at paragraph [0025] recites:

[0025] FIG. 3 presents a candidate relational database logical design 19 for capturing information about the sensor network 4, comprising: a node address for each of the sensing nodes 2 in the network, as shown in a Node Table 20; each sensing node's connectivity to other sensing nodes, as shown in a Links Table 22; the information content each node presents, as shown in one or more Node Data Table(s) 24; and a history of the network's state, as reflected in a Node History Table 28 and a Link History Table 26.

Bennett at the Summary recites:

## SUMMARY OF THE INVENTION

A system of the present invention includes a relational database management system (RDBMS), where information is maintained in one or more database tables for easy, efficient storage and retrieval. In addition to database tables, the system provides "design documents" which allow a user 55 to customize how his or her data are presented, including formats which are not tabular. Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place.

The system of the present invention provides a data 60 modeling component or module for simplifying the creation of design documents. A "data model" is a graphical representation of the relationship between tables one may use in a design document. The model provides the user with a simple, intuitive way of telling the system which tables are 65 desired to be displayed in a design document and how such tables work together.

The data modeling module includes tools to assist the user in achieving a desired model. In general operation, the user specifies two tables to link (e.g., with a pointing device). In response, the system of the present invention intelligently determines a link (relationship) which is desired between the tables. First, the system automatically attempts to create a link using a unique key (i.e., primary key, candidate key, or other unique index) of the master table. If a foreign key relationship exists between the two tables (e.g., defined previously through referential integrity), then the system automatically selects the foreign key relationship to display to the user as a suggested link.

In the event that no foreign key relationship exists, the system determines if one may be implied. Specifically, the system searches for an index (or indexable field) of the detail table which is data-type compatible with that of the primary (unique) key field of the master. If none exists, then no link will be suggested. If one is found, however, the system will then proceed to find the best name match available (from the one or more data-type compatible indexes). Upon selecting an index, the system may suggest a link as follows. If the index of the detail table is a unique index, then a one-to-one link is inferred. If, on the other hand, the index of the detail table is non-unique, then a one-to-many link is implied. In the instance that no such index has been selected (or can be built from one or more indexable fields), then the system does not suggest a link to the user. At this point, however, the user may manually select a desired field(s) to link on, whereupon the system automatically attempts to locate a corresponding field which satisfies the selected field(s).

After determining the best possible link (if any), the user is provided with a screen dialog whereby the link may be accepted or rejected. Tools are also provided which allow the user to manually construct a link as desired. In this manner, the data modeling module of the present invention allows a user to

efficiently and quickly create a desired data model, thereby simplifying the task of designing documents for presenting one's information in a desired format.

Bennett at the Abstract recites:

#### ABSTRACT

A system includes a relational database management system (RDBMS) having a data modeling component. A "data model" is a graphical representation of the relationship between tables one may use in a design document. "Design documents" allow a user to customize how his or her data are presented, including presenting information in formats which are not tabular and including formats which link together different tables (so that information stored in separate tables appears to the user to come from one place). Methods are described for automatically linking tables to be placed in a data model by comparing unique keys (e.g., primary key or other unique identifier) of one table with indexes (or indexable fields) of another table. Based upon the comparison, the system automatically suggests an appropriate link (if any) for the tables.

Claim 1 recites, "creating one or more first-administered content indexes for a first set of notes:"

In contrast, Mulgund et al. at paragraph [0007] recite:

[0007] In another aspect, the present invention is a method of database modeling that makes it possible to create, store, and update a virtual model of a network of sensors within a relational database structure. The network modeling agent dynamically updates various sensor node data and link data that collectively define an instantaneous "state" of the sensor network into the database logical design. The network modeling agent thereby facilitates access, visualization, and the use of a stream of information generated by the network of distributed sensors. The sensor nodes to be interrogated by the network modeling agent are assumed to be uniquely addressable and in communication, using networking protocols, with one another through links and with a database server through one or more access points. A method according to the present invention comprises the steps of discovering and maintaining the distributed sensor network topology by applying at every access point a quasi-recursive algorithm, which causes the network modeling agent to visit a first sensor node and mark the first node visited, push the marked first node onto a stack, and while the stack is non-empty, query the node at the top of the stack for a list of current links to the node at the top, compare the list of current links to a list of historical links to the node at the top of

the stack and update the historical link and historical node information, and if there are no unmarked nodes reachable from a current link then pop the stack, otherwise visit the next reachable unmarked node, mark the next node and push it onto the stack. The network modeling agent builds the database model by updating relational database logical design tables at each step of the discovering step. The agent maintains the database model by periodically reapplying the interrogating algorithm, thereby updating the database model to account for sensor node and link additions and deletions. The periodicity of updates is preferably such that a near real-time topology of the sensor network is maintained.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating one or more first-administered content indexes for a first set of motes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 1, "creating one or more first-administered content indexes for a first set of motes." Indeed, although Mulgund et al. recite, "The agent maintains the database model . . . thereby updating the database model to account for sensor node and link additions and deletions," Mulgund et al. fail to teach or suggest, "creating one or more first-administered content indexes for a first set of motes," as recited in claim 1. Further, Mulgund et al. fail to recite "content indexes." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "creating one or more first-administered content indexes for a first set of motes," as recited in claim 1. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 1. Therefore, Applicants respectfully request that the Examiner hold Independent Claim 1 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Grounding of the rejection of claim 1 on rejections included in co-pending application 10/816,375 fails to reject claim 1 with specificity and thus fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the

reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 37 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

## **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection (no claims are identified in co-pending application) and a plurality of claims are grouped together (i.e., no claims in co-pending application are identified), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Independent Claim 1 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, claim 1 recites, "obtaining at least a part of the one or more first-administered content indexes of the first set of notes."

In contrast, Mulgund et al. at paragraphs [0062] and [0026] recite:

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion



imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "obtaining at least a part of the one or more first-administered content indexes of the first set of notes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 1, "obtaining at least a part of the one or more first-administered content indexes of the first set of notes." Indeed, although Mulgund et al. recite, "Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3," Mulgund et al. fail to teach or suggest, "obtaining at least a part of the one or more first-administered content indexes of the first set of notes." Further, Mulgund et al. fail to recite, "content indexes." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "obtaining at least a part of the one or more first-administered content indexes of the first set of notes," as recited in claim 1. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 1. Therefore, Applicants respectfully request that the Examiner hold Independent Claim 1 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, claim 1 recites, "creating one or more second-administered content indexes for a second set of notes."

And the Office action recites:

It is being noted that, based on the current specification, the step of creating and obtaining is performed in essentially the same fashion for both first-administered and second-administered content indexes as well as for the first and second set of notes.

As a result, a pure repetition of creating and obtaining steps for first and second sets of notes is redundant, as it does not further limit the claim. Mulgund

shows a first and second-administered content indexes for corresponding first and second sets of notes (Figs. 1, 3, and 4).

Applicant respectfully disagrees. Claim 1 recites, "a first set of notes," and "a second set of notes." It is improper for the Office action to read either of those recitations out of the claim. If the Office maintains this rejection in the next communication, Applicant respectfully requests that the Examiner include citation to legal authority in support of the Office action position that the recitations can be read-out of claim 1. Further, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate Figs. 1, 3, and 4 of Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 1, "obtaining at least a part of the one or more first-administered content indexes of the first set of notes."

Further, claim 1 recites, "obtaining at least a part of the second-administered content indexes of the second set of notes."

And the Office action recites:

It is being noted that, based on the current specification, the step of creating and obtaining is performed in essentially the same fashion for both first-administered and second-administered content indexes as well as for the first and second set of notes.

As a result, a pure repetition of creating and obtaining steps for first and second sets of notes is redundant, as it does not further limit the claim. Mulgund shows a first and second-administered content indexes for corresponding first and second sets of notes (Figs. 1, 3, and 4).

Applicants respectfully disagree. Claim 1 recites, "a first set of notes," and "a second set of notes." It is improper for the Office action to read either of those recitations out of the claim. If the Office maintains this rejection in the next communication, Applicant respectfully requests that the Examiner include citation to legal authority in support of the Office action position that the recitations can be read-out of claim 1. Further, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate Figs. 1, 3, and 4 of Mulgund et al. or any other material included in Mulgund et al. with

the recitation of claim 1, "obtaining at least a part of the second-administered content indexes of the second set of notes."

Still further, claim 1 recites, "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes."

In contrast, Mulgund et al at the Abstract, paragraph [0005], and paragraph [0025] recite:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of a traversal and interrogating network modeling agent. The distributed sensors nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

[0005] The tools needed to implement the vision of seamless, global access to remote information are available only in part, and not yet as an integrated package. The Applicants describe below the development of an information architecture, which is referred to in certain embodiments as Intelmetric™, and a method of using the architecture which make it possible to aggregate, store, process, and distributed, real-time distributed sensor data into the enterprise, and make resulting information readily available over the Internet.

[0025] FIG. 3 presents a candidate relational database logical design 19 for capturing information about the sensor network 4, comprising: a node address for each of the sensing nodes 2 in the network, as shown in a Node Table 20; each sensing node's connectivity to other sensing nodes, as shown in a Links Table 22; the information content each node presents, as shown in one or more Node Data Table(s) 24; and a history of the network's state, as reflected in a Node History Table 28 and a Link History Table 26.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating a federated index from at least a part of the one or more first-

administered content indexes and at least a part of the one or more second- administered content indexes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 1, "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second- administered content indexes." Indeed, Mulgund et al. fail to recite "federated index." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes," as recited in claim 1. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 1. Therefore, Applicants respectfully request that the Examiner hold Independent Claim 1 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Also, in contrast to claim 1, Bennett et al. at the Summary recite:

## SUMMARY OF THE INVENTION

A system of the present invention includes a relational database management system (RDBMS), where information is maintained in one or more database tables for easy, efficient storage and retrieval. In addition to database tables, the system provides "design documents" which allow a user 55 to customize how his or her data are presented, including formats which are not tabular. Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place.

The system of the present invention provides a data 60 modeling component or module for simplifying the creation of design documents. A "data model" is a graphical representation of the relationship between tables one may use in a design document. The model provides the user with a simple, intuitive way of telling the system which tables are 65 desired to be displayed in a design document and how such tables work together.

The data modeling module includes tools to assist the user in achieving a desired model. In general operation, the user specifies two tables to link (e.g., with a pointing device). In response, the system of the present invention intelligently determines a link (relationship) which is desired between the tables. First, the system automatically attempts to create a link using a unique key (i.e., primary key, candidate key, or other unique index) of the master table. If a foreign key relationship exists between the two tables (e.g., defined previously through

referential integrity), then the system automatically selects the foreign key relationship to display to the user as a suggested link.

In the event that no foreign key relationship exists, the system determines if one may be implied. Specifically, the system searches for an index (or indexable field) of the detail table which is data-type compatible with that of the primary (unique) key field of the master. If none exists, then no link will be suggested. If one is found, however, the system will then proceed to find the best name match available (from the one or more data-type compatible indexes). Upon selecting an index, the system may suggest a link as follows. If the index of the detail table is a unique index, then a one-to-one link is inferred. If, on the other hand, the index of the detail table is non-unique, then a one-to-many link is implied. In the instance that no such index has been selected (or can be built from one or more indexable fields), then the system does not suggest a link to the user. At this point, however, the user may manually select a desired field(s) to link on, whereupon the system automatically attempts to locate a corresponding field which satisfies the selected field(s).

After determining the best possible link (if any), the user is provided with a screen dialog whereby the link may be accepted or rejected. Tools are also provided which allow the user to manually construct a link as desired. In this manner, the data modeling module of the present invention allows a user to efficiently and quickly create a desired data model, thereby simplifying the task of designing documents for presenting one's information in a desired format.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Bennett et al. or any other material included in Bennett et al. with the recitation of claim 1, "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes." Indeed, Bennett et al. fail to recite "federated index." Hence, the Office action fails to show how Bennett et al. teach or suggest, "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes," as recited in claim 1. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 1. Therefore, Applicants respectfully request that the Examiner hold Independent Claim 1 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, although the Office action cites to Bennett et al. at the Abstract in support of combining Mulgund et al. and Bennett et al., the Office action fails to supply citation to a teaching, suggestion, or motivation in the citations that support the combination of documents.

Bennett et al. at the Abstract recite:

#### ABSTRACT

A system includes a relational database management system (RDBMS) having a data modeling component. A "data model" is a graphical representation of the relationship between tables one may use in a design document. "Design documents" allow a user to customize how his or her data are presented, including presenting information in formats which are not tabular and including formats which link together different tables (so that information stored in separate tables appears to the user to come from one place). Methods are described for automatically linking tables to be placed in a data model by comparing unique keys (e.g., primary key or other unique identifier) of one table with indexes (or indexable fields) of another table. Based upon the comparison, the system automatically suggests an appropriate link (if any) for the tables.

Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W. L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 1, the Office action still fails to state a prima facie case of obviousness with respect to claim 1. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 1 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, Applicants conclude that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2), the Examiner must provide an affidavit or

declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

**2. Dependent Claims 2-107 Patentable for at Least Reasons of Dependency from Independent Claim 1**

Claims 2-107 depend either directly or indirectly from Independent Claim 1. "A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." *See* 35 U.S.C. § 112 paragraph 4. Consequently, Dependent Claims 2-107 are patentable for at least the reasons why Independent Claim 1 is patentable. Accordingly, Applicant respectfully requests that Examiner hold Dependent Claims 2-107 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.



### 3. Dependent Claims 2-19 Independently Patentable

Notwithstanding their dependency from Dependent Claim 1, Dependent Claims 2-19 are patentable on their own merits.

Claims 2-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejections of claims 2-19.

In support of the rejection, the Office action at page 11 recites:

As to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16 of the co-pending application 10/816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

The rejections fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

### **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16") and a plurality of claims are grouped together ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re*

*Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 2-19 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

#### 4. Dependent Claims 20-24 Independently Patentable

Notwithstanding their dependency from Independent Claim 1, Dependent Claims 20-24 are patentable on their own merits.

Claims 20-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejections of claims 20-24.

In support of the rejection, the Office action at page 11 recites:

As to claims 20-22 and 23-24, 68-70 and 71-72, these claims have similar limitations as claims 1-3 and 11-12 of the co-pending application 10/816,102 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 21, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . ."

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

#### **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 20-22 and 23-24, 68-70 and 71-72, these claims have similar limitations as claims 1-3 and 11-12 of co-pending application 10/816,102") and a plurality of claims are grouped together ("[a]s to claims 20-22 and 23-24, 68-70 and 71-72, these claims have similar limitations as claims 1-3 and 11-12 of the co-pending application 10/816,102"), the ground of the rejection is not fully and clearly stated.

Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 20-24 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

## 5. Dependent Claims 25-44 Independently Patentable

Notwithstanding their dependency from Independent Claim 1, Dependent Claims 25-44 are patentable on their own merits.

Claims 25-44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejections of claim 25-44.

In support of the rejection, the Office action at page 11 recites:

As to claims 25-44 and 73-92, these claims have similar limitations as claims 1-20 of the co-pending application 10/816,375 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 2, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . ."

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

### **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 25-44 and 73-92, these claims have similar limitations as claims 1-20 of the co-pending application 10/816,375") and a plurality of claims are grouped together ("[a]s to claims 25-44 and 73-92, these claims have similar limitations as claims 1-20 of the co-pending application 10/816,375"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.



Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 25-44 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

## 6. Dependent Claim 45 Independently Patentable

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 45 is patentable on its own merits.

Claim 45 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claim 45.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of notes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of notes;
  - creating one or more second-administered content indexes for a second set of notes;
  - obtaining at least a part of the second-administered content indexes of the second set of notes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 25 recites:

25. The method of Claim 1, wherein said creating one or more first-administered content indexes for a first set of notes further comprises:
  - determining at least one of a sensing function or a control function at a mote; and
  - creating one or more mote-addressed content indexes in response to said determining.

Claim 45 recites:

45. The method of Claim 25, wherein said creating one or more mote-addressed content indexes in response to said determining further comprises:  
selecting from one or more established standards or protocols.

In support of the rejection, the Office action at page 12 recites:

As to claims 45, 46, 93, and 94, Mulgund shows selecting from one or more established standards or protocols and publishing at least a part of an identifier of the selected established standard or protocol [selecting and identifying selected protocol such as the Internet] (abstract).

Mulgund at the Abstract recites:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of a traversal and interrogating network modeling agent. The distributed sensors nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

Claim 45 recites, "wherein said creating one or more mote-addressed content indexes in response to said determining further comprises: selecting from one or more established standards or protocols." Thus, Applicants' protocols are directed to "index" protocols.

In contrast, Mulgund et al. at the Abstract recites:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of a traversal and interrogating network modeling agent. The distributed sensors

nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "wherein said creating one or more mote-addressed content indexes in response to said determining further comprises: selecting from one or more established standards or protocols." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 45, " wherein said creating one or more mote-addressed content indexes in response to said determining further comprises: selecting from one or more established standards or protocols." Hence, the Office action fails to show how Mulgund et al. teach or suggest, " wherein said creating one or more mote-addressed content indexes in response to said determining further comprises: selecting from one or more established standards or protocols," as recited in claim 45. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 45. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 45 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation that support the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W. L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 45, the Office action still fails to state a prima facie case of obviousness with respect to claim 45. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 45 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2), the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

## **7. Dependent Claim 46 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 46 is patentable on its own merits.

Claim 46 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claim 46.

Claim 1 recites:

1. A method comprising:  
creating one or more first-administered content indexes for a first set of notes;  
obtaining at least a part of the one or more first-administered content indexes of the first set of notes;  
creating one or more second-administered content indexes for a second set of notes;  
obtaining at least a part of the second-administered content indexes of the second set of notes; and  
creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 25 recites:

25. The method of Claim 1, wherein said creating one or more first-administered content indexes for a first set of notes further comprises:  
determining at least one of a sensing function or a control function at a mote; and  
creating one or more mote-addressed content indexes in response to said determining.

Claim 45 recites:

45. The method of Claim 25, wherein said creating one or more mote-addressed content indexes in response to said determining further comprises:  
selecting from one or more established standards or protocols.

Claim 46 recites:

46. The method of Claim 45, wherein said selecting from one or more established standards or protocols further comprises:  
publishing at least a part of an identifier of the selected established standard or protocol.

In support of the rejection, the Office action at page 12 recites:

As to claims 45, 46, 93, and 94, Mulgund shows selecting from one or more established standards or protocols and publishing at least a part of an identifier of the selected established standard or protocol [selecting and identifying selected protocol such as the Internet] (abstract).

Mulgund at the Abstract recites:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of a traversal and interrogating network modeling agent. The distributed sensors nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

Claim 46 recites, "publishing at least a part of an identifier of the selected established standard or protocol."

In contrast, Mulgund et al. at the Abstract recites:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of a traversal and interrogating network modeling agent. The distributed sensors nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "publishing at least a part of an identifier of the selected established standard or protocol." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 46, "publishing at least a part of an identifier of the selected established standard or protocol." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "publishing at least a part of an identifier of the selected established standard or protocol," as recited in claim 46. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 46. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 46 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation that support the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W. L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 46, the Office action still fails to state a prima facie case



of obviousness with respect to claim 46. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 46 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

## 8. Dependent Claim 47 Independently Patentable

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 47 is patentable on its own merits.

Claim 47 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claim 47.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of notes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of notes;
  - creating one or more second-administered content indexes for a second set of notes;
  - obtaining at least a part of the second-administered content indexes of the second set of notes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 25 recites:

25. The method of Claim 1, wherein said creating one or more first-administered content indexes for a first set of notes further comprises:
  - determining at least one of a sensing function or a control function at a mote; and
  - creating one or more mote-addressed content indexes in response to said determining.

Claim 45 recites:

45. The method of Claim 25, wherein said creating one or more mote-addressed content indexes in response to said determining further comprises:  
selecting from one or more established standards or protocols.

Claim 47 recites:

47. The method of Claim 45, wherein said selecting from one or more established standards or protocols further comprises:  
encryption utilizing at least one of a private and a public key.

In support of the rejection, the Office action at page 12 recites:

As to claims 47 and 95, these claims has similar limitations as claim 11 of the co-pending application 10/816,102 and therefore is rejected for the same reasons as provided in the Office Action mailed on August 21, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

#### **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 47 and 95, these claims have similar limitations as claim 11 of the co-pending application 10/816,102") and a plurality of claims are grouped together ("has similar limitations as claim 11 of the co-pending application 10/816,102"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 47 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

## 9. Dependent Claims 48-49 Independently Patentable

Notwithstanding their dependency from Independent Claim 1, Dependent Claims 48 and 49 are patentable on its own merits.

Claims 48 and 49 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claim 48.

In support of the rejection, the Office action at page 12 recites:

As to claims 48, 49, 96, and 97, these claims have similar limitations as claims 26 and 27 of the co-pending application 10/816,102 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 21, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . ."

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

## **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 48, 49, 96, and 97, these claims have similar limitations as claims 26 and 27 of the co-pending application 10/816,102" ) and a plurality of claims are grouped together ("[a]s As to claims 48, 49, 96, and 97, these claims have similar limitations as claims 26 and 27 of the co-pending application 10/816,102"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 48 and 49 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.



## 10. Dependent Claims 50-67 Independently Patentable

Notwithstanding their dependency from Independent Claim 1, Dependent Claims 50-67 are patentable on their own merits.

Claims 50-67 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejections of claims 50-67.

In support of the rejection, the Office action at page 11 recites:

As to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16 of the co-pending application 101816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . ."

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

## **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16") and a plurality of claims are grouped together ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re*

*Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 50-67 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

## 11. Dependent Claims 68-72 Independently Patentable

Notwithstanding their dependency from Independent Claim 1, Dependent Claims 68-72 are patentable on their own merits.

Claims 68-72 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejections of claims 68-72.

In support of the rejection, the Office action at page 11 recites:

As to claims 20-22 and 23-24, 68-70 and 71-72, these claims have similar limitations as claims 1-3 and 11-12 of the co-pending application 10/816,102 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 21, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

### **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 20-22 and 23-24, 68-70 and 71-72, these claims have similar limitations as claims 1-3 and 11-12 of co-pending application 10/816,102") and a plurality of claims are grouped together ("[a]s to claims 20-22 and 23-24, 68-70 and 71-72, these claims have similar limitations as claims 1-3 and 11-12 of the co-pending application 10/816,102"), the ground of the rejection is not fully and clearly stated.

Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 68-72 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

## 12. Dependent Claims 73-92 Independently Patentable

Notwithstanding their dependency from Independent Claim 1, Dependent Claims 73-92 are patentable on their own merits.

Claims 73-92 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejections of claims 73-92.

In support of the rejection, the Office action at page 11 recites:

As to claims 25-44 and 73-92, these claims have similar limitations as claims 1-20 of the co-pending application 10/816,375 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 2, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . ."

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

#### **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 25-44 and 73-92, these claims have similar limitations as claims 1-20 of the co-pending application 10/816,375") and a plurality of claims are grouped together ("[a]s to claims 25-44 and 73-92, these claims have similar limitations as claims 1-20 of the co-pending application 10/816,375"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.



Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 73-92 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

### 13. Dependent Claim 93 Independently Patentable

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 93 is patentable on its own merits.

Claim 93 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claim 93.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of motes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of motes;
  - creating one or more second-administered content indexes for a second set of motes;
  - obtaining at least a part of the second-administered content indexes of the second set of motes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 73 recites:

73. The method of Claim 1, wherein said creating one or more second-administered content indexes for a second set of motes further comprises:
  - determining at least one of a sensing function or a control function at a mote; and
  - creating one or more mote-addressed content indexes in response to said determining.

Claim 93 recites:

93. The method of Claim 73, wherein said creating one or more mote-addressed content indexes in response to said determining further comprises:  
selecting from one or more established standards or protocols.

In support of the rejection, the Office action at page 12 recites:

As to claims 45, 46, 93, and 94, Mulgund shows selecting from one or more established standards or protocols and publishing at least a part of an identifier of the selected established standard or protocol [selecting and identifying selected protocol such as the Internet] (abstract).

Mulgund at the Abstract recites:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of a traversal and interrogating network modeling agent. The distributed sensors nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

Claim 93 recites, "wherein said creating one or more mote-addressed content indexes in response to said determining further comprises: selecting from one or more established standards or protocols." Thus, Applicants' protocols are directed to "index" protocols.

In contrast, Mulgund et al. at the Abstract recites:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of

a traversal and interrogating network modeling agent. The distributed sensors nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "wherein said creating one or more mote-addressed content indexes in response to said determining further comprises: selecting from one or more established standards or protocols." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 93, " wherein said creating one or more mote-addressed content indexes in response to said determining further comprises: selecting from one or more established standards or protocols." Hence, the Office action fails to show how Mulgund et al. teaches or suggests, " wherein said creating one or more mote-addressed content indexes in response to said determining further comprises: selecting from one or more established standards or protocols," as recited in claim 93. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 93. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 93 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation that support the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W. L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 93, the Office action still fails to state a prima facie case of obviousness with respect to claim 93. Therefore, Applicants respectfully request that the

Examiner hold Dependent Claim 93 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

#### 14. Dependent Claim 94 Independently Patentable

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 94 is patentable on its own merits.

Claim 94 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claim 94.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of notes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of notes;
  - creating one or more second-administered content indexes for a second set of notes;
  - obtaining at least a part of the second-administered content indexes of the second set of notes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 73 recites:

73. The method of Claim 1, wherein said creating one or more second-administered content indexes for a second set of notes further comprises:
  - determining at least one of a sensing function or a control function at a mote; and
  - creating one or more mote-addressed content indexes in response to said determining.

Claim 93 recites:

93. The method of Claim 73, wherein said creating one or more mote-addressed content indexes in response to said determining further comprises:  
selecting from one or more established standards or protocols.

Claim 94 recites:

94. The method of Claim 93, wherein said selecting from one or more established standards or protocols further comprises:  
publishing at least a part of an identifier of the selected established standard or protocol.

In support of the rejection, the Office action at page 12 recites:

As to claims 45, 46, 93, and 94, Mulgund shows selecting from one or more established standards or protocols and publishing at least a part of an identifier of the selected established standard or protocol [selecting and identifying selected protocol such as the Internet] (abstract).

Mulgund at the Abstract recites:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of a traversal and interrogating network modeling agent. The distributed sensors nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

Claim 94 recites, "publishing at least a part of an identifier of the selected established standard or protocol."

In contrast, Mulgund et al. at the Abstract recites:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of a traversal and interrogating network modeling agent. The distributed sensors nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "publishing at least a part of an identifier of the selected established standard or protocol," Thus, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 94, "publishing at least a part of an identifier of the selected established standard or protocol." Hence, the Office action fails to show how Mulgund et al. teaches or suggests, "publishing at least a part of an identifier of the selected established standard or protocol," as recited in claim 94. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 94. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 94 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation that support the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W. L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).



Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 94, the Office action still fails to state a prima facie case of obviousness with respect to claim 94. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 94 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

## 15. Dependent Claim 95 Independently Patentable

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 95 is patentable on its own merits.

Claim 95 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claim 95.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of motes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of motes;
  - creating one or more second-administered content indexes for a second set of motes;
  - obtaining at least a part of the second-administered content indexes of the second set of motes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 73 recites:

73. The method of Claim 1, wherein said creating one or more second-administered content indexes for a second set of motes further comprises:
  - determining at least one of a sensing function or a control function at a mote; and
  - creating one or more mote-addressed content indexes in response to said determining.

Claim 93 recites:

93. The method of Claim 73, wherein said creating one or more mote-addressed content indexes in response to said determining further comprises:  
selecting from one or more established standards or protocols.

Claim 95 recites:

95. The method of Claim 93, wherein said established standards or protocols further comprises:  
encryption utilizing at least one of a private and a public key.

In support of the rejection, the Office action at page 12 recites:

As to claims 47 and 95, these claims has similar limitations as claim 11 of the co-pending application 10/816,102 and therefore is rejected for the same reasons as provided in the Office Action mailed on August 21, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . ."

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

## **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 47 and 95, these claims have similar limitations as claim 11 of the co-pending application 10/816,102") and a plurality of claims are grouped together ("has similar limitations as claim 11 of the co-pending application

10/816,102"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 95 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

## 16. Dependent Claim 96-97 Independently Patentable

Notwithstanding their dependency from Independent Claim 1, Dependent Claims 96-97 are patentable on their own merits.

Claims 96 and 97 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejections of claim 96 and 97.

In support of the rejection, the Office action at page 12 recites:

As to claims 48, 49, 96, and 97, these claims have similar limitations as claims 26 and 27 of the co-pending application 10/816,102 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 21, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

#### **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 48, 49, 96, and 97, these claims have similar limitations as claims 26 and 27 of the co-pending application 10/816,102" ) and a plurality of claims are grouped together ("[a]s As to claims 48, 49, 96, and 97, these claims have similar limitations as claims 26 and 27 of the co-pending application 10/816,102"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re*

*Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicant's opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 96 and 97 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.



## **17. Dependent Claim 98 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 98 is patentable on its own merits.

Claim 98 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 98.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of notes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of notes;
  - creating one or more second-administered content indexes for a second set of notes;
  - obtaining at least a part of the second-administered content indexes of the second set of notes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 98 recites:

98. The method of Claim 1, wherein said creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes further comprises:
  - creating the federated index from at least a part of one or more multi-mote content indexes of the first set of notes.

In support of the rejection, the Office action at page 9 recites:

As to claims 98 and 100, Mulgund shows creating the federated index from at least a part of one or more multi-mote content indexes of the first (second) set of notes (Fig. 4, par. [0042]).

Mulgund at paragraph [0042] recites:

[0042] In another embodiment, the database logical design 19 further comprises a Data Table List 30 that provides a mapping between individual nodes 2 and the names of the tables used to store those nodes' Sensor Data. Each of these tables is defined and created dynamically, based on the structure of the information at each node. FIG. 4 illustrates an embodiment of a network model logical design 19 for a three-node network configuration wherein each of the three nodes (A, B, C) provides a different amount of data. As such a network is traversed and the Nodes Table 20 is populated, an entry is made in the Data Table List Table 30 that identifies the name of the table associated with a given node. In the example illustrated, each node (A, B, C) has its own Node Data Table (27A-C). Each of Node Data Table is defined to accommodate the type of sensor data known to originate from that node. As discussed earlier, it is assumed that the software agent on the database server can interrogate the node to determine what type of information it provides, and then define the table structures accordingly.

Claim 98 recites, "creating the federated index from at least a part of **one or more multi-mote content indexes of the first set of motes.**" (emphasis added)

In contrast, Mulgund et al. at paragraph [0042] recite:

[0042] In another embodiment, the database logical design 19 further comprises a Data Table List 30 that provides a mapping between individual nodes 2 and the names of the tables used to store those nodes' Sensor Data. Each of these tables is defined and created dynamically, based on the structure of the information at each node. FIG. 4 illustrates an embodiment of a network model logical design 19 for a three-node network configuration wherein each of the three nodes (A, B, C) provides a different amount of data. As such a network is traversed and the Nodes Table 20 is populated, an entry is made in the Data Table List Table 30 that identifies the name of the table associated with a given node. In the example illustrated, each node (A, B, C) has its own Node Data Table (27A-C). Each of Node Data Table is defined to accommodate the type of sensor data known to originate from that node. As discussed earlier, it is assumed that the software agent on the database server can interrogate the node to determine what type of information it provides, and then define the table structures accordingly.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating the federated index from at least a part of one or more multi-mote

content indexes of the first set of notes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 98, "creating the federated index from at least a part of **one or more multi-note content indexes of the first set of notes.**" (emphasis added) Hence, the Office action fails to show how Mulgund et al. teach or suggest, "creating the federated index from at least a part of **one or more multi-note content indexes of the first set of notes,**" as recited in claim 98. (emphasis added) Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 98. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 98 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation in the citations that support the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W. L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 98, the Office action still fails to state a prima facie case of obviousness with respect to claim 98. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 98 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests

that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

**18. Dependent Claim 99 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 99 is patentable on its own merits.

Claim 99 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 99.

Claim 1 recites:

1. A method comprising:  
creating one or more first-administered content indexes for a first set of motes;  
obtaining at least a part of the one or more first-administered content indexes of the first set of motes;  
creating one or more second-administered content indexes for a second set of motes;  
obtaining at least a part of the second-administered content indexes of the second set of motes; and  
creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 99 recites:

99. The method of Claim 1, wherein said creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes further comprises:  
creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the first set of motes.

In support of the rejection, the Office action at page 9 recites:

As to claims 99 and 101, Mulgund shows creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the first (second) set of motes [visiting a node and retrieving the information stored at the node) (paragraphs [0007], [0026] lines 11-17, and [0062]).

Mulgund at paragraph [0007] recites:

[0007] In another aspect, the present invention is a method of database modeling that makes it possible to create, store, and update a virtual model of a network of sensors within a relational database structure. The network modeling agent dynamically updates various sensor node data and link data that collectively define an instantaneous "state" of the sensor network into the database logical design. The network modeling agent thereby facilitates access, visualization, and the use of a stream of information generated by the network of distributed sensors. The sensor nodes to be interrogated by the network modeling agent are assumed to be uniquely addressable and in communication, using networking protocols, with one another through links and with a database server through one or more access points. A method according to the present invention comprises the steps of discovering and maintaining the distributed sensor network topology by applying at every access point a quasi-recursive algorithm, which causes the network modeling agent to visit a first sensor node and mark the first node visited, push the marked first node onto a stack, and while the stack is non-empty, query the node at the top of the stack for a list of current links to the node at the top, compare the list of current links to a list of historical links to the node at the top of the stack and update the historical link and historical node information, and if there are no unmarked nodes reachable from a current link then pop the stack, otherwise visit the next reachable unmarked node, mark the next node and push it onto the stack. The network modeling agent builds the database model by updating relational database logical design tables at each step of the discovering step. The agent maintains the database model by periodically reapplying the interrogating algorithm, thereby updating the database model to account for sensor node and link additions and deletions. The periodicity of updates is preferably such that a near real-time topology of the sensor network is maintained.

Mulgund at paragraph [0062] recites:

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

Mulgund at paragraph [0026], lines 11-17, recites:

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Claim 99 recites, "**creating the federated index from** at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index **of the first set of motes.**" (emphasis added)

In contrast, Mulgund et al. at paragraphs [0007], [0062], and [0026] recite:

[0007] In another aspect, the present invention is a method of database modeling that makes it possible to create, store, and update a virtual model of a network of sensors within a relational database structure. The network modeling agent dynamically updates various sensor node data and link data that collectively define an instantaneous "state" of the sensor network into the database logical design. The network modeling agent thereby facilitates access, visualization, and the use of a stream of information generated by the network of distributed sensors. The sensor nodes to be interrogated by the network modeling agent are assumed to be uniquely addressable and in communication, using networking protocols, with one another through links and with a database server through one or more access points. A method according to the present invention comprises the steps of discovering and maintaining the distributed sensor network topology by applying at every access point a quasi-recursive algorithm, which causes the network modeling agent to visit a first sensor node and mark the first node visited, push the marked first node onto a stack, and while the stack is non-empty, query the node at the top of the stack for a list of current links to the node at the top, compare the list of current links to a list of historical links to the node at the top of the stack and update the historical link and historical node information, and if there are no unmarked nodes reachable from a current link then pop the stack, otherwise visit the next reachable unmarked node, mark the next node and push it

onto the stack. The network modeling agent builds the database model by updating relational database logical design tables at each step of the discovering step. The agent maintains the database model by periodically reapplying the interrogating algorithm, thereby updating the database model to account for sensor node and link additions and deletions. The periodicity of updates is preferably such that a near real-time topology of the sensor network is maintained.

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the first set of motes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 99, "**creating the federated index from** at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of **the first set of motes.**" (emphasis added) Hence, the Office action fails to show how Mulgund et al. teaches or suggests, "**creating the federated index from** at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of **the first set of motes.**" (emphasis added) Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 99.



Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 99 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation in the citations that support the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W. L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 99, the Office action still fails to state a prima facie case of obviousness with respect to claim 99. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 99 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, Applicants conclude that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

## **19. Dependent Claim 100 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 100 is patentable on its own merits.

Claim 100 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 100.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of motes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of motes;
  - creating one or more second-administered content indexes for a second set of motes;
  - obtaining at least a part of the second-administered content indexes of the second set of motes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 100 recites:

100. The method of Claim 1, wherein said creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes further comprises:
  - creating the federated index from at least a part of one or more multi-mote content indexes of the second set of motes.

In support of the rejection, the Office action at page 9 recites:

As to claims 98 and 100, Mulgund shows creating the federated index from at least a part of one or more multi-mote content indexes of the first (second) set of motes (Fig. 4, par. [0042]).

Mulgund at paragraph [0042] recites:

[0042] In another embodiment, the database logical design 19 further comprises a Data Table List 30 that provides a mapping between individual nodes 2 and the names of the tables used to store those nodes' Sensor Data. Each of these tables is defined and created dynamically, based on the structure of the information at each node. FIG. 4 illustrates an embodiment of a network model logical design 19 for a three-node network configuration wherein each of the three nodes (A, B, C) provides a different amount of data. As such a network is traversed and the Nodes Table 20 is populated, an entry is made in the Data Table List Table 30 that identifies the name of the table associated with a given node. In the example illustrated, each node (A, B, C) has its own Node Data Table (27A-C). Each of Node Data Table is defined to accommodate the type of sensor data known to originate from that node. As discussed earlier, it is assumed that the software agent on the database server can interrogate the node to determine what type of information it provides, and then define the table structures accordingly.

Claim 100 recites, "creating the federated index from at least a part of **one or more multi-mote content indexes of the second set of motes.**" (emphasis added)

In contrast, Mulgund et al. at paragraph [0042] recite:

[0042] In another embodiment, the database logical design 19 further comprises a Data Table List 30 that provides a mapping between individual nodes 2 and the names of the tables used to store those nodes' Sensor Data. Each of these tables is defined and created dynamically, based on the structure of the information at each node. FIG. 4 illustrates an embodiment of a network model logical design 19 for a three-node network configuration wherein each of the three nodes (A, B, C) provides a different amount of data. As such a network is traversed and the Nodes Table 20 is populated, an entry is made in the Data Table List Table 30 that identifies the name of the table associated with a given node. In the example illustrated, each node (A, B, C) has its own Node Data Table (27A-C). Each of Node Data Table is defined to accommodate the type of sensor data known to originate from that node. As discussed earlier, it is assumed that the software

agent on the database server can interrogate the node to determine what type of information it provides, and then define the table structures accordingly.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating the federated index from at least a part of one or more multi-mote content indexes of the second set of motes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 100, "creating the federated index from at least a part of **one or more multi-mote content indexes of the second set of motes.**" (emphasis added) Hence, the Office action fails to show how Mulgund et al. teach or suggest, "creating the federated index from at least a part of **one or more multi-mote content indexes of the second set of motes,**" as recited in claim 100. (emphasis added) Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 100. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 100 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation in the citations that support the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W. L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 100, the Office action still fails to state a prima facie case of obviousness with respect to claim 100. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 100 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

## **20. Dependent Claim 101 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 101 is patentable on its own merits.

Claim 101 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 101.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of motes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of motes;
  - creating one or more second-administered content indexes for a second set of motes;
  - obtaining at least a part of the second-administered content indexes of the second set of motes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 101 recites:

101. The method of Claim 1, wherein said creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes further comprises:
  - creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the second set of motes.

In support of the rejection, the Office action at page 9 recites:

As to claims 99 and 101, Mulgund shows creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the first (second) set of motes [visiting a node and retrieving the information stored at the node) (paragraphs [0007], [0026] lines 11-17, and [0062]).

Mulgund at paragraph [0007] recites:

[0007] In another aspect, the present invention is a method of database modeling that makes it possible to create, store, and update a virtual model of a network of sensors within a relational database structure. The network modeling agent dynamically updates various sensor node data and link data that collectively define an instantaneous "state" of the sensor network into the database logical design. The network modeling agent thereby facilitates access, visualization, and the use of a stream of information generated by the network of distributed sensors. The sensor nodes to be interrogated by the network modeling agent are assumed to be uniquely addressable and in communication, using networking protocols, with one another through links and with a database server through one or more access points. A method according to the present invention comprises the steps of discovering and maintaining the distributed sensor network topology by applying at every access point a quasi-recursive algorithm, which causes the network modeling agent to visit a first sensor node and mark the first node visited, push the marked first node onto a stack, and while the stack is non-empty, query the node at the top of the stack for a list of current links to the node at the top, compare the list of current links to a list of historical links to the node at the top of the stack and update the historical link and historical node information, and if there are no unmarked nodes reachable from a current link then pop the stack, otherwise visit the next reachable unmarked node, mark the next node and push it onto the stack. The network modeling agent builds the database model by updating relational database logical design tables at each step of the discovering step. The agent maintains the database model by periodically reapplying the interrogating algorithm, thereby updating the database model to account for sensor node and link additions and deletions. The periodicity of updates is preferably such that a near real-time topology of the sensor network is maintained.

Mulgund at paragraph [0062] recites:

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

Mulgund at paragraph [0026], lines 11-17, recites:

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Claim 101 recites, "**creating the federated index from** at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index **of the second set of motes.**" (emphasis added)

In contrast, Mulgund et al. at paragraphs [0007], [0062], and [0026] recite:

[0007] In another aspect, the present invention is a method of database modeling that makes it possible to create, store, and update a virtual model of a network of sensors within a relational database structure. The network modeling agent dynamically updates various sensor node data and link data that collectively define an instantaneous "state" of the sensor network into the database logical design. The network modeling agent thereby facilitates access, visualization, and the use of a stream of information generated by the network of distributed sensors. The sensor nodes to be interrogated by the network modeling agent are assumed to be uniquely addressable and in communication, using networking protocols, with one another through links and with a database server through one or more access points. A method according to the present invention comprises the steps of discovering and maintaining the distributed sensor network topology by applying at every access point a quasi-recursive algorithm, which causes the network modeling agent to visit a first sensor node and mark the first node visited, push



the marked first node onto a stack, and while the stack is non-empty, query the node at the top of the stack for a list of current links to the node at the top, compare the list of current links to a list of historical links to the node at the top of the stack and update the historical link and historical node information, and if there are no unmarked nodes reachable from a current link then pop the stack, otherwise visit the next reachable unmarked node, mark the next node and push it onto the stack. The network modeling agent builds the database model by updating relational database logical design tables at each step of the discovering step. The agent maintains the database model by periodically reapplying the interrogating algorithm, thereby updating the database model to account for sensor node and link additions and deletions. The periodicity of updates is preferably such that a near real-time topology of the sensor network is maintained.

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the second set of motes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 101, **"creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the second set of motes."** (emphasis added) Hence, the

Office action fails to show how Mulgund et al. teach or suggest, "**creating the federated index from** at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of **the second set of notes.**" (emphasis added) Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 101. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 101 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation that support the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W. L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 101, the Office action still fails to state a prima facie case of obviousness with respect to claim 101. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 101 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

## **21. Dependent Claim 102 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 102 is patentable on its own merits.

Claim 102 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett et al. and in further view of Nelson (2004/0122849). Applicants respectfully traverse the rejection of claim 102.

Claim 1 recites:

1. A method comprising:  
creating one or more first-administered content indexes for a first set of notes;  
obtaining at least a part of the one or more first-administered content indexes of the first set of notes;  
creating one or more second-administered content indexes for a second set of notes;  
obtaining at least a part of the second-administered content indexes of the second set of notes; and  
creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 102 recites:

102. The method of Claim 1, wherein said creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes further comprises:  
generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries.

In support of the rejection, the office action at page 13 recites:

As to claim 102, Mulgund in view of Bennett shows all the elements except for generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries.

Nelson shows generating the federated index [database table] to have one or more entries noting one or more respective administrative domains of one or more content index entries (abstract, Figs. 3A-3C, par. [0017]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries in order to limit a user access to documents in the database only to the user's own domain (abstract in Nelson).

Nelson in the Abstract recites:

In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

Nelson at paragraph [0017] recites:

[0017] FIGS. 3A-3C are database tables within a content management system that supports administrative domains.

Claim 102 recites, "generating the federated index to have one or more entries noting one or more respective **administrative domains of one or more content index entries.**" (emphasis added)

In contrast, Nelson at the Abstract and paragraph [0017] recites:

In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a

user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

[0017] FIGS. 3A-3C are database tables within a content management system that supports administrative domains.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Nelson or any other material included in Nelson with the recitation of claim 102, "generating **the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries.**" (emphasis added) Hence, the Office action fails to show how Nelson teaches or suggests, "generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries," as recited in claim 102. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 102. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 102 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation that support the combination of documents. Nelson fails to support the asserted teaching. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al., Bennett et al., and Nelson as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor

taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 102, the Office action still fails to state a prima facie case of obviousness with respect to claim 102. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 102 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

## **22. Dependent Claim 103 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 103 is patentable on its own merits.

Claim 103 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett et al. and in further view of Nelson (2004/0122849). Applicants respectfully traverse the rejection of claim 103.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of notes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of notes;
  - creating one or more second-administered content indexes for a second set of notes;
  - obtaining at least a part of the second-administered content indexes of the second set of notes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 103 recites:

103. The method of Claim 1, wherein said creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes further comprises:

- generating the federated index to have access information to one or more content indexes for an administered content index.

In support of the rejection, the Office action at page 14 recites:

As to claim 103, Mulgund in view of Bennett shows all the elements except for generating the federated index to have access information to one or more content indexes for an administered content index.

Nelson shows generating the federated index [database table] to have access information [domain ID] to one or more content indexes for an administered content index (abstract, Figs. 3A-3C and 7, par. [0017]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by generating the federated index to have access information to one or more content indexes for an administered content index in order to limit a user access to documents in the database only to the user's own domain (abstract in Nelson).

Nelson in the Abstract recites:

In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

Nelson at paragraph [0017] recites:

[0017] FIGS. 3A-3C are database tables within a content management system that supports administrative domains.

Claim 103 recites, "generating the federated index to have access information to one or more content indexes for an administered content index."

In contrast, Nelson at the Abstract and paragraph [0017] recites:

In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content



management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

[0017] FIGS. 3A-3C are database tables within a content management system that supports administrative domains.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have access information to one or more content indexes for an administered content index." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Nelson or any other material included in Nelson with the recitation of claim 103, "generating the federated index to have access information to one or more content indexes for an administered content index." Indeed, although Nelson recites "administrative domains," none of the citations, including Nelson, recite, "administered content index," as recited in claim 103. Hence, the Office action fails to show how Nelson teaches or suggests, "generating the federated index to have access information to one or more content indexes for an administered content index," as recited in claim 103. Thus, the Office action fails to state a *prima facie* case of obviousness with respect to claim 103. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 103 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation support the combination of documents. The citation to the Nelson abstract fails to support the asserted teaching. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al., Bennett et al., and Nelson as required under *In re Sang Su Lee*:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 103, the Office action still fails to state a prima facie case of obviousness with respect to claim 103. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 103 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

### **23. Dependent Claim 104 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 104 is patentable on its own merits.

Claim 104 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 104.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of notes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of notes;
  - creating one or more second-administered content indexes for a second set of notes;
  - obtaining at least a part of the second-administered content indexes of the second set of notes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 104 recites:

104. The method of Claim 1, wherein said creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes further comprises:
  - generating the federated index to have information pertaining to a currency of at least one entry of an administered content index.

In support of the rejection, the Office action at page 10 recites:

As to claims 104 and 150, Mulgund shows generating the federated index to have information pertaining to a currency of at least one entry of an administered content index [timestamp status] (Figs. 3 and 4).

Mulgund at paragraph [0041], in describing Fig. 3 recites:

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates n well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by n individual sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Claim 104 recites, "generating the federated index to have information pertaining to a currency of at least one entry of **an administered content index.**" (emphasis added)

In contrast, Mulgund et al. at paragraph [0041] recites:

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates n well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by n individual sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have information pertaining to a currency of at least one entry of an administered content index." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other

material included in Mulgund et al. with the recitation of claim 104, "generating the federated index to have information pertaining to a currency of at least one entry of **an administered content index**." (emphasis added) Further, Mulgund et al. fail to recite "an administered content index," as recited in claim 104. Hence, the Office action fails to show how Mulgund et al. teach or suggest, "generating the federated index to have information pertaining to a currency of at least one entry of **an administered content index**," as recited in claim 104. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 104. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 104 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation in the citations that supports the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 104, the Office action still fails to state a prima facie case of obviousness with respect to claim 104. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 104 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

## **24. Dependent Claim 105 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 105 is patentable on its own merits.

Claim 105 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 105.

Claim 1 recites:

1. A method comprising:  
creating one or more first-administered content indexes for a first set of notes;  
obtaining at least a part of the one or more first-administered content indexes of the first set of notes;  
creating one or more second-administered content indexes for a second set of notes;  
obtaining at least a part of the second-administered content indexes of the second set of notes; and  
creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 105 recites:

105. The method of Claim 1, wherein said creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes further comprises:  
generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index.

In support of the rejection, the Office action at page 10 recites:

As to claims 105 and 151, Mulgund shows generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index [timestamp status] (Figs. 3 and 4, par. [0041]).

Mulgund at paragraph [0041], in describing Fig. 3 recites:

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates n well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by n individual sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Claim 105 recites, "generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index. "

Mulgund at paragraph [0041], in describing Fig. 3 recites:

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates n well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by n individual sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 105, "generating the federated

index to have information pertaining to an expiration of at least one entry of an administered content index." Further, Mulgund et al. fails to recite "expiration," as recited in claim 105. Hence, the Office action fails to show how Mulgund et al. teach or suggest, "generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index," as recited in claim 105. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 105. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 105 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation in the citations that supports the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 105, the Office action still fails to state a prima facie case of obviousness with respect to claim 105. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 105 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.



## **25. Dependent Claim 106 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 106 is patentable on its own merits.

Claim 106 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett et al. and in further view of Nelson (2004/0122849). Applicants respectfully traverse the rejection of claim 106.

Claim 1 recites:

1. A method comprising:  
creating one or more first-administered content indexes for a first set of  
motes;  
obtaining at least a part of the one or more first-administered content  
indexes of the first set of motes;  
creating one or more second-administered content indexes for a second set  
of motes;  
obtaining at least a part of the second-administered content indexes of the  
second set of motes; and  
creating a federated index from at least a part of the one or more first-  
administered content indexes and at least a part of the one or more second-  
administered content indexes.

Claim 106 recites:

106. The method of Claim 1, wherein said creating a federated index from  
at least a part of the one or more first-administered content indexes and at least a  
part of the one or more second-administered content indexes further comprises:  
generating the federated index to have metadata pertaining to an  
administrative domain, wherein the metadata includes at least one of an  
ownership indicator, an access right indicator, an index refresh indicator, or a  
predefined policy indicator.

In support of the rejection, the Office action at page 14 recites:

As to claim 106, Mulgund in view of Bennett shows all the elements except for generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes an ownership indicator.

Nelson shows generating the federated index [database table] to have metadata pertaining to an administrative domain, wherein the metadata includes an ownership indicator (par. [0040], Fig. 3C).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes an ownership indicator in order to limit a user access to documents in the database only to the user's own domain (abstract in Nelson).

Mulgund at paragraph [0040] recites:

[0040] The relational database logical design 19 is further comprised of one or more Node Data Tables 24 used to capture the actual information content from each node; i.e., the sensor data output. This is highly problem-specific, because the Sensor Data could range in complexity from periodic ambient temperature measurements to full-motion MPEG video that streams from each node. Furthermore, each node could be generating a different type of information, which would necessitate the definition and instantiation of several different Sensor Data Tables 24, perhaps even more than one per node (depending on the complexity of the information stream).

Claim 106 recites, "generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes at least one of an ownership indicator, an access right indicator, an index refresh indicator, or a predefined policy indicator."

In contrast, Nelson at paragraph [0040] recites:

[0040] A component table 64, held in the library server, is depicted in FIG. 3C. Each item stored in the content management system has a corresponding row in the component table 64. The row contains an item identifier 66 as well as metadata used to describe the item. For example, the component table contains an item type column 68 indicating the type of the item, a resource manager column 70 specifying the resource manager on which the item is recorded, and a collection ID column 72 indicating a storage collection on the resource manager in which the item is recorded. The component table is modified to include a

domain ID column 74. The domain ID column specifies a domain with which the item is associated. For example, item A is associated with domain D3 and item B is associated with domain D4. The component table can include one or more other rows 76 with other attributes to describe the item.

And Nelson at the Abstract recites:

In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes at least one of an ownership indicator, an access right indicator, an index refresh indicator, or a predefined policy indicator." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Nelson or any other material included in Nelson with the recitation of claim 106, "generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes at least one of an ownership indicator, an access right indicator, an index refresh indicator, or a predefined policy indicator." Further, Nelson fails to recite "metadata" or ""metadata pertaining to an administrative domain," as recited in claim 106. Hence, the Office action fails to show how Nelson teaches or suggests, "generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes at least one of an ownership indicator, an access right indicator, an index refresh indicator, or a predefined policy indicator." Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 106. Therefore, Applicants respectfully request that the Examiner hold

Dependent Claim 106 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action citation to Nelson fails to support the argument that the references supply a teaching, suggestion, or motivation to combine the documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al., Bennett et al., and Nelson as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 106, the Office action still fails to state a prima facie case of obviousness with respect to claim 106. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 106 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action's citation to the Abstract of Nelson fails to provide a teaching, suggestion or motivation to combine the references, Applicants conclude the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

## **26. Dependent Claim 107 Independently Patentable**

Notwithstanding its dependency from Independent Claim 1, Dependent Claim 107 is patentable on its own merits.

Claim 107 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund et al. in view of Bennett and in further view of "TAG: a Tiny Aggregation Service for Ad-Hoc Sensor Networks" by Samuel Madden et al. Applicants respectfully traverse the rejection of claim 107.

Claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of notes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of notes;
  - creating one or more second-administered content indexes for a second set of notes;
  - obtaining at least a part of the second-administered content indexes of the second set of notes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

Claim 107 recites:

107. The method of Claim 1, wherein said creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes further comprises:
  - generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain.

In support of the rejection, the Office action at page 16 recites:

As to claim 107, Mulgund in view of Bennett shows all the elements except for having an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain.

Madden shows having an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain (abstract, section 1.1 the TAG Approach).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by having an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain in order produce updated content index (Mulgund, par. [0041]).

Madden at the Abstract recites:

We present the Tiny AGgregation (TAG) service for aggregation in TinyOS. TAG allows users to express simple, declarative queries and have them distributed and executed efficiently in networks of low-power, wireless sensors. We discuss various generic properties of aggregates, and show how those properties affect the performance of our in-network approach. We include a performance study demonstrating the advantages of our approach over traditional centralized, out-of-network methods, and discuss a variety of optimizations for improving the performance and fault-tolerance of the basic solution.

Madden at Section 1.1. recites:

### 1.1 The TAG Approach

We have developed Tiny AGgregation (TAG), a generic aggregation service for ad hoc networks of TinyOS motes. There are two essential attributes of this service. First, it provides a simple, declarative interface for aggregation, inspired by aggregation operators in database query languages. Second, it intelligently distributes and executes aggregation operators in the sensor network in a time and power-efficient manner, and is sensitive to the resource constraints and lossy communication properties of wireless sensor mote networks. TAG processes aggregates in network by computing over the data as it flows through the sensors, discarding irrelevant data and combining relevant readings into more compact records whenever possible.

TAG operates as follows: users pose aggregation queries from a powered, storage-rich basestation.

Operators that implement the query are distributed into the network by piggybacking on the existing ad hoc networking protocol. Sensors mute data back towards the user through a routing tree rooted at the basestation. As data flows up

this tree, it is aggregated according to an aggregation function and value-based partitioning specified in the query. For example, consider the problem of counting the number of nodes in a network of indeterminate size. First, the request to count is injected into the network. Then, each leaf node in the tree reports a count of 1 to their parent; interior nodes sum the count of their children, add 1 to it, and report that value to their parent. Counts propagate up the tree in this manner, and flow out at the root.

Mulgund at paragraph [0041] recites:

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates n well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by n individual sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Claim 107 recites, "generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain."

In contrast, Madden at the Abstract, Madden at Section 1.1, and Mulgund at paragraph [0041] recites:

We present the Tiny AGgregation (TAG) service for aggregation in TinyOS. TAG allows users to express simple, declarative queries and have them distributed and executed efficiently in networks of low-power, wireless sensors. We discuss various generic properties of aggregates, and show how those properties affect the performance of our in-network approach. We include a performance study demonstrating the advantages of our approach over traditional centralized, out-of-network methods, and discuss a variety of optimizations for improving the performance and fault-tolerance of the basic solution.

## 1.1 The TAG Approach

We have developed Tiny AGgregation (TAG), a generic aggregation service for ad hoc networks of TinyOS motes. There are two essential attributes of this service. First, it provides a simple, declarative interface for aggregation, inspired by aggregation operators in database query languages. Second, it intelligently distributes and executes aggregation operators in the sensor network in a time and power-efficient manner, and is sensitive to the resource constraints and lossy communication properties of wireless sensor mote networks. TAG processes aggregates in network by computing over the data as it flows through the sensors, discarding irrelevant data and combining relevant readings into more compact records whenever possible.

TAG operates as follows: users pose aggregation queries from a powered, storage-rich basestation.

Operators that implement the query are distributed into the network by piggybacking on the existing ad hoc networking protocol. Sensors mute data back towards the user through a routing tree rooted at the basestation. As data flows up this tree, it is aggregated according to an aggregation function and value-based partitioning specified in the query. For example, consider the problem of counting the number of nodes in a network of indeterminate size. First, the request to count is injected into the network. Then, each leaf node in the tree reports a count of 1 to their parent; interior nodes sum the count of their children, add 1 to it, and report that value to their parent. Counts propagate up the tree in this manner, and flow out at the root.

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates  $n$  well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by  $n$  individual sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.



Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Madden et al. or any other material included in Madden et al. with the recitation of claim 107, "generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain." Further, Madden et al. fails to recite "domain-specific query string," as recited in claim 107. Hence, the Office action fails to show how Madden et al. teach or suggest, "generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain." Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 107. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 107 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action citation to Mulgund et al. fail to support the argument that the references supply a teaching, suggestion, or motivation to combine the documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al., Bennett et al., and Madden et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 107, the Office action still fails to state a prima facie case of obviousness with respect to claim 107. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 107 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action's citation to the Mulgund et al. fail to provide a teaching, suggestion or motivation to combine the references, Applicants conclude the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

## 27. Independent Claim 129

Claim 129 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* (U.S. Patent No.: 5,615,367). Applicants respectfully traverses the rejection of claim 129.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of notes;  
obtaining at least a part of a second-administered content index from a second set of notes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

In support of the rejection, the Office action at page 10 recites:

As to claims 108 and 129, Mulgund shows all the elements, similar to claim 1, as discussed above.

In support of the rejection of claim 1, the Office action at page 8 recites:

As to claim 1, Mulgund shows:  
creating one or more content indexes for a set of notes [building a database model by updating relational database logical design tables at each step of the discovering step (paragraph 0007)] (similarly to claim 1 of the co-pending application 10/816,375 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 2, 2007);  
obtaining at least a part of the one or more content indexes of the set of notes [visiting a node and retrieving the information stored at the node] (paragraph 0062) wherein information is retrieved from a knowledge base (18) at a node (paragraph [0026 lines 11-17] and used to form a relational database (Fig. 3 and Fig. 4).

It is being noted that, based on the current specification, the step of creating and obtaining is performed in essentially the same fashion for both first-

administered and second-administered content indexes as well as for the first and second set of notes.

As a result, a pure repetition of creating and obtaining steps for first and second sets of notes is redundant, as it does not further limit the claim. Mulgund shows a first and second-administered content indexes for corresponding first and second sets of notes (Figs. 1, 3, and 4).

Mulgund shows creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes (abstract, paragraph [0005] and [0025], Fig. 3, Fig. 4).

Alternatively, Bennett shows creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes [creating a design document from a first and second tables] (summary of the invention, Fig. 5A).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund by creating a federated index explicitly from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes in order to aggregate information from first and second indexes [tables] into a relational database (abstract, in Bennett).

Claim 129 recites, "obtaining at least a part of the one or more first-administered content indexes of the first set of notes."

In contrast, Mulgund et al. at paragraphs [0062] and [0026] recite:

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing

nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "obtaining at least a part of the one or more first-administered content indexes of the first set of notes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 129, "obtaining at least a part of the one or more first-administered content indexes of the first set of notes." Indeed, although Mulgund et al. recite, "Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3," Mulgund et al. fail to teach or suggest, "obtaining at least a part of the one or more first-administered content indexes of the first set of notes." Further, Mulgund et al. fail to recite, "content indexes." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "obtaining at least a part of the one or more first-administered content indexes of the first set of notes," as recited in claim 129. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 129. Therefore, Applicants respectfully request that the Examiner hold Independent Claim 129 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, claim 129 recites, "obtaining at least a part of the second-administered content indexes of the second set of notes."

And the Office action recites:

It is being noted that, based on the current specification, the step of creating and obtaining is performed in essentially the same fashion for both first-administered and second-administered content indexes as well as for the first and second set of notes.

As a result, a pure repetition of creating and obtaining steps for first and second sets of notes is redundant, as it does not further limit the claim. Mulgund shows a first and second-administered content indexes for corresponding first and second sets of notes (Figs. 1, 3, and 4).

Applicants respectfully disagree. Claim 129 recites, "a first set of motes," and "a second set of motes." It is improper for the Office action to read either of those recitations out of the claim. If the Office maintains this rejection in the next communication, Applicant respectfully requests that the Examiner include citation to legal authority in support of the Office action position that the recitations can be read-out of claim 129. Further, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate Figs. 1, 3, and 4 of Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 129, "obtaining at least a part of the second-administered content indexes of the second set of motes."

Still further, claim 129 recites, "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes."

In contrast, Mulgund et al at the Abstract, paragraph [0005], and paragraph [0025] recite:

Method of and system for aggregating into a relational database model the state of an ad hoc network comprised of uniquely addressable distributed sensor nodes in communication using networking protocols with one another through links and to a database server through access points. A relational database logical design resident on the database server is dynamically updated with respect to the sensor network's current and historical topological information through the use of a traversal and interrogating network modeling agent. The distributed sensors nodes may be mobile, and may communicate by wired or wireless means through networking protocols such as the Internet.

Mulgund at paragraph [0005] recites:

[0005] The tools needed to implement the vision of seamless, global access to remote information are available only in part, and not yet as an integrated package. The Applicants describe below the development of an information architecture, which is referred to in certain embodiments as Intelemetric™, and a method of using the architecture which make it possible to aggregate, store, process, and distributed, real-time distributed sensor data into the enterprise, and make resulting information readily available over the Internet.

Mulgund at paragraph [0025] recites:

[0025] FIG. 3 presents a candidate relational database logical design 19 for capturing information about the sensor network 4, comprising: a node address for each of the sensing nodes 2 in the network, as shown in a Node Table 20; each sensing node's connectivity to other sensing nodes, as shown in a Links Table 22; the information content each node presents, as shown in one or more Node Data Table(s) 24; and a history of the network's state, as reflected in a Node History Table 28 and a Link History Table 26.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 129, "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes." Indeed, Mulgund et al. fail to recite "federated index." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes," as recited in claim 129. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 129. Therefore, Applicants respectfully request that the Examiner hold Independent Claim 129 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Also, in contrast to claim 129, Bennett et al. at the Summary recite:

#### SUMMARY OF THE INVENTION

A system of the present invention includes a relational database management system (RDBMS), where information is maintained in one or more database tables for easy, efficient storage and retrieval. In addition to database tables, the system provides "design documents" which allow a user 55 to customize how his or her data are presented, including formats which are not tabular. Design documents can also link together different tables, so that information stored in separate tables appears to the user to come from one place.

The system of the present invention provides a data modeling component or module for simplifying the creation of design documents. A "data model" is a graphical representation of the relationship between tables one may use in a design document. The model provides the user with a simple, intuitive way of telling the system which tables are desired to be displayed in a design document and how such tables work together.

The data modeling module includes tools to assist the user in achieving a desired model. In general operation, the user specifies two tables to link (e.g., with a pointing device). In response, the system of the present invention intelligently determines a link (relationship) which is desired between the tables. First, the system automatically attempts to create a link using a unique key (i.e., primary key, candidate key, or other unique index) of the master table. If a foreign key relationship exists between the two tables (e.g., defined previously through referential integrity), then the system automatically selects the foreign key relationship to display to the user as a suggested link.

In the event that no foreign key relationship exists, the system determines if one may be implied. Specifically, the system searches for an index (or indexable field) of the detail table which is data-type compatible with that of the primary (unique) key field of the master. If none exists, then no link will be suggested. If one is found, however, the system will then proceed to find the best name match available (from the one or more data-type compatible indexes). Upon selecting an index, the system may suggest a link as follows. If the index of the detail table is a unique index, then a one-to-one link is inferred. If, on the other hand, the index of the detail table is non-unique, then a one-to-many link is implied. In the instance that no such index has been selected (or can be built from one or more indexable fields), then the system does not suggest a link to the user. At this point, however, the user may manually select a desired field(s) to link on, whereupon the system automatically attempts to locate a corresponding field which satisfies the selected field(s).

After determining the best possible link (if any), the user is provided with a screen dialog whereby the link may be accepted or rejected. Tools are also provided which allow the user to manually construct a link as desired. In this manner, the data modeling module of the present invention allows a user to efficiently and quickly create a desired data model, thereby simplifying the task of designing documents for presenting one's information in a desired format.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Bennett et al. or any other material included in Bennett et al. with the



recitation of claim 129, "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes." Indeed, Bennett et al. fail to recite "federated index." Hence, the Office action fails to show how Bennett et al. teach or suggest, "creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes," as recited in claim 129. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 129. Therefore, Applicants respectfully request that the Examiner hold Independent Claim 129 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, although the Office action cites to Bennett et al. at the Abstract in support of combining Mulgund et al. and Bennett et al., the Office action fails to supply citation to a teaching, suggestion, or motivation in the citations that support the combination of documents.

Bennett et al. at the Abstract recite:

#### ABSTRACT

A system includes a relational database management system (RDBMS) having a data modeling component. A "data model" is a graphical representation of the relationship between tables one may use in a design document. "Design documents" allow a user to customize how his or her data are presented, including presenting information in formats which are not tabular and including formats which link together different tables (so that information stored in separate tables appears to the user to come from one place). Methods are described for automatically linking tables to be placed in a data model by comparing unique keys (e.g., primary key or other unique identifier) of one table with indexes (or indexable fields) of another table. Based upon the comparison, the system automatically suggests an appropriate link (if any) for the tables.

Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor

taught against its teacher." W. L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 129, the Office action still fails to state a prima facie case of obviousness with respect to claim 129. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 129 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." The Bennett Abstract fails to support the assertion that the combination is obvious. If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

**28. Dependent Claims 130-153 Patentable for at Least Reasons of Dependency from Independent Claim 129**

Claims 130-153 depend either directly or indirectly from Independent Claim 129. "A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." See 35 U.S.C. § 112 paragraph 4. Consequently, Dependent Claims 130-153 are patentable for at least the reasons why Independent Claim 129 is patentable. Accordingly, Applicant respectfully requests that Examiner hold Dependent Claims 130-153 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

## 29. Dependent Claim 130 Independently Patentable

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 130 is patentable on its own merits.

Claim 130 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claim 130.

In support of the rejection, the Office action at page 12 recites:

As to claims 130 and 137, these claims have similar limitations as claim 3, discussed above.

In support of the rejection of claim 3, the Office action at page 11 recites:

As to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16 of the co-pending application 101816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

## **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16") and a plurality of claims are grouped together ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicant's opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 130 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

### 30. Dependent Claims 131-134 Independently Patentable

Notwithstanding their dependency from Independent Claim 129, Dependent Claims 131-134 are patentable on their own merits.

Claims 131-134 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claims 131-134.

In support of the rejections, the Office action at page 12 recites:

As to claims 131-134 and 138-141, these claims have similar limitations as claims 12-15, discussed above.

In support of the rejection of claims 12-15 the Office action at page 11 recites:

As to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16 of the co-pending application 10/816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

## **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16") and a plurality of claims are grouped together ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.



Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicant's opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 131-134 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

### 31. Dependent Claims 135-136 Independently Patentable

Notwithstanding their dependency from Independent Claim 129, Dependent Claims 135-136 are patentable on their own merits.

Claims 135-136 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claims 135-136.

In support of the rejection, the Office action at page 14 recites:

As to claims 135-136 and 142-143, these claims have similar limitations as claims 9-10, discussed above.

In support of the rejections of claims 9-10, the Office action at page 11 recites:

As to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16 of the co-pending application 10/816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

The rejections fail to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejections are improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejections fail to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

## **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejections include an omnibus rejection ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16") and a plurality of claims are grouped together ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16"), the grounds of the rejections are not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicant's opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 135-136 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

### 32. Dependent Claim 137 Independently Patentable

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 137 is patentable on its own merits.

Claim 137 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejection of claim 137.

In support of the rejection, the Office action at page 12 recites:

As to claims 130 and 137, these claims have similar limitations as claim 3, discussed above.

In support of the rejection of claim 3, the Office action at page 11 recites:

As to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16 of the co-pending application 101816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

## **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16") and a plurality of claims are grouped together ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicant's opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 137 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

### 33. Dependent Claims 138-141 Independently Patentable

Notwithstanding their dependency from Independent Claim 129, Dependent Claims 138-141 are patentable on their own merits.

Claims 138-141 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejections of claim 138-141.

In support of the rejection, the Office action at page 12 recites:

As to claims 131-134 and 138-141, these claims have similar limitations as claims 12-15, discussed above.

In support of the rejection of claim 12-15, the Office action at page 11 recites:

As to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16 of the co-pending application 10/816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)



And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . ."

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

## **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16") and a plurality of claims are grouped together ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16"), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicant's opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 138-141 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

### 34. Dependent Claims 142-143 Independently Patentable

Notwithstanding their dependency from Independent Claim 129, Dependent Claims 142-143 are patentable on their own merits.

Claims 142-143 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund *et al.* (2002/0161751) in view of Bennett *et al.* and further in view of other references used to reject corresponding claims of the co-pending applications. Applicants respectfully traverse the rejections of claims 142-143.

In support of the rejection, the Office action at page 14 recites:

As to claims 135-136 and 142-143, these claims have similar limitations as claims 9-10, discussed above.

In support of the rejection of claim 9, the Office action at page 11 recites:

As to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16 of the co-pending application 101816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . ."

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular part of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

## **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16") and a plurality of claims are grouped together ("[a]s to claims 2-19 and 50-67, these claims have similar limitations as claims 1-16"), the

ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicant's opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 142-143 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

### **35. Dependent Claim 144 Independently Patentable**

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 144 is patentable on its own merits.

Claim 144 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 144.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of motes;  
obtaining at least a part of a second-administered content index from a second set of motes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

Claim 144 recites:

144. The method of Claim 129, wherein said creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index further comprises:  
creating the federated index from at least a part of one or more multi-mote content indexes of the first set of motes.

In support of the rejection, the Office action at page 10 recites:

As to claims 144 and 146, Mulgund shows all the elements, similar to claim 98, as discussed above.

In support of the rejection of Claim 98, the Office action at page 9 recites:

As to claims 98 and 100, Mulgund shows creating the federated index from at least a part of one or more multi-mote content indexes of the first (second) set of motes (Fig. 4, par. [0042]).

Mulgund at paragraph [0042] recites:

[0042] In another embodiment, the database logical design 19 further comprises a Data Table List 30 that provides a mapping between individual nodes 2 and the names of the tables used to store those nodes' Sensor Data. Each of these tables is defined and created dynamically, based on the structure of the information at each node. FIG. 4 illustrates an embodiment of a network model logical design 19 for a three-node network configuration wherein each of the three nodes (A, B, C) provides a different amount of data. As such a network is traversed and the Nodes Table 20 is populated, an entry is made in the Data Table List Table 30 that identifies the name of the table associated with a given node. In the example illustrated, each node (A, B, C) has its own Node Data Table (27A-C). Each of Node Data Table is defined to accommodate the type of sensor data known to originate from that node. As discussed earlier, it is assumed that the software agent on the database server can interrogate the node to determine what type of information it provides, and then define the table structures accordingly.

Claim 144 recites, "creating the federated index from at least a part of **one or more multi-mote content indexes of the first set of motes.**" (emphasis added) In contrast, Mulgund, at paragraph [0042] recites:

[0042] In another embodiment, the database logical design 19 further comprises a Data Table List 30 that provides a mapping between individual nodes 2 and the names of the tables used to store those nodes' Sensor Data. Each of these tables is defined and created dynamically, based on the structure of the information at each node. FIG. 4 illustrates an embodiment of a network model logical design 19 for a three-node network configuration wherein each of the three nodes (A, B, C) provides a different amount of data. As such a network is traversed and the Nodes Table 20 is populated, an entry is made in the Data Table List Table 30 that identifies the name of the table associated with a given node. In the example illustrated, each node (A, B, C) has its own Node Data Table (27A-C). Each of Node Data Table is defined to accommodate the type of sensor data known to originate from that node. As discussed earlier, it is assumed that the software agent on the database server can interrogate the node to determine what type of information it provides, and then define the table structures accordingly.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating the federated index from at least a part of one or more multi-mote content indexes of the first set of motes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 144, "creating the federated index from at least a part of one or more multi-mote content indexes of the first set of motes." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "creating the federated index from at least a part of one or more multi-mote content indexes of the first set of motes," as recited in claim 144. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 144. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 144 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation that supports the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 144, the Office action still fails to state a prima facie case of obviousness with respect to claim 144. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 144 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2), the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus,



if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

### **36. Dependent Claim 145 Independently Patentable**

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 145 is patentable on its own merits.

Claim 145 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 145.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of motes;  
obtaining at least a part of a second-administered content index from a second set of motes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

Claim 145 recites:

145. The method of Claim 129, wherein said creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index further comprises:  
creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the first set of motes.

In support of the rejection, the Office action at page 10 recites:

As to claims 145 and 147, Mulgund shows all the elements, similar to claim 99, as discussed above.

In support of the rejection of claim 99, the Office action at page 9 recites:

As to claims 99 and 101, Mulgund shows creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-

addressed control index, or a mote-addressed routing/spatial index of the first (second) set of motes [visiting a node and retrieving the information stored at the node) (paragraphs [0007], [0026] lines 11-17, and [0062]).

Mulgund at paragraph [0007] recites:

[0007] In another aspect, the present invention is a method of database modeling that makes it possible to create, store, and update a virtual model of a network of sensors within a relational database structure. The network modeling agent dynamically updates various sensor node data and link data that collectively define an instantaneous "state" of the sensor network into the database logical design. The network modeling agent thereby facilitates access, visualization, and the use of a stream of information generated by the network of distributed sensors. The sensor nodes to be interrogated by the network modeling agent are assumed to be uniquely addressable and in communication, using networking protocols, with one another through links and with a database server through one or more access points. A method according to the present invention comprises the steps of discovering and maintaining the distributed sensor network topology by applying at every access point a quasi-recursive algorithm, which causes the network modeling agent to visit a first sensor node and mark the first node visited, push the marked first node onto a stack, and while the stack is non-empty, query the node at the top of the stack for a list of current links to the node at the top, compare the list of current links to a list of historical links to the node at the top of the stack and update the historical link and historical node information, and if there are no unmarked nodes reachable from a current link then pop the stack, otherwise visit the next reachable unmarked node, mark the next node and push it onto the stack. The network modeling agent builds the database model by updating relational database logical design tables at each step of the discovering step. The agent maintains the database model by periodically reapplying the interrogating algorithm, thereby updating the database model to account for sensor node and link additions and deletions. The periodicity of updates is preferably such that a near real-time topology of the sensor network is maintained.

Mulgund at paragraph [0062] recites:

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

Mulgund at paragraph [0026], lines 11-17, recites:

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Claim 145 recites, "creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the first set of motes."

In contrast, Mulgund, at paragraph [0007], [0062], and [0026] recites:

[0007] In another aspect, the present invention is a method of database modeling that makes it possible to create, store, and update a virtual model of a network of sensors within a relational database structure. The network modeling agent dynamically updates various sensor node data and link data that collectively define an instantaneous "state" of the sensor network into the database logical design. The network modeling agent thereby facilitates access, visualization, and the use of a stream of information generated by the network of distributed sensors. The sensor nodes to be interrogated by the network modeling agent are assumed to be uniquely addressable and in communication, using networking protocols, with one another through links and with a database server through one or more access points. A method according to the present invention comprises the steps of discovering and maintaining the distributed sensor network topology by applying at every access point a quasi-recursive algorithm, which causes the network modeling agent to visit a first sensor node and mark the first node visited, push the marked first node onto a stack, and while the stack is non-empty, query the node at the top of the stack for a list of current links to the node at the top, compare the list of current links to a list of historical links to the node at the top of the stack and update the historical link and historical node information, and if there are no unmarked nodes reachable from a current link then pop the stack, otherwise visit the next reachable unmarked node, mark the next node and push it onto the stack. The network modeling agent builds the database model by updating relational database logical design tables at each step of the discovering

step. The agent maintains the database model by periodically reapplying the interrogating algorithm, thereby updating the database model to account for sensor node and link additions and deletions. The periodicity of updates is preferably such that a near real-time topology of the sensor network is maintained.

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the first set of motes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 145, "creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the first set of motes." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the first set of motes," as recited in claim 145. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 145. Therefore, Applicants

respectfully request that the Examiner hold Dependent Claim 145 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation that supports the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 145, the Office action still fails to state a prima facie case of obviousness with respect to claim 145. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 145 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2), the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

### **37. Dependent Claim 146 Independently Patentable**

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 146 is patentable on its own merits.

Claim 146 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 146.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of notes;  
obtaining at least a part of a second-administered content index from a second set of notes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

Claim 146 recites:

146. The method of Claim 129, wherein said creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index further comprises:  
creating the federated index from at least a part of one or more multi-note content indexes of the second set of notes.

In support of the rejection, the Office action at page 10 recites:

As to claims 144 and 146, Mulgund shows all the elements, similar to claim 98, as discussed above.

In support of the rejection of Claim 98, the Office action at page 9 recites:

As to claims 98 and 100, Mulgund shows creating the federated index from at least a part of one or more multi-mote content indexes of the first (second) set of motes (Fig. 4, par. [0042]).

Mulgund at paragraph [0042] recites:

[0042] In another embodiment, the database logical design 19 further comprises a Data Table List 30 that provides a mapping between individual nodes 2 and the names of the tables used to store those nodes' Sensor Data. Each of these tables is defined and created dynamically, based on the structure of the information at each node. FIG. 4 illustrates an embodiment of a network model logical design 19 for a three-node network configuration wherein each of the three nodes (A, B, C) provides a different amount of data. As such a network is traversed and the Nodes Table 20 is populated, an entry is made in the Data Table List Table 30 that identifies the name of the table associated with a given node. In the example illustrated, each node (A, B, C) has its own Node Data Table (27A-C). Each of Node Data Table is defined to accommodate the type of sensor data known to originate from that node. As discussed earlier, it is assumed that the software agent on the database server can interrogate the node to determine what type of information it provides, and then define the table structures accordingly.

Claim 146 recites, "creating the federated index from at least a part of **one or more multi-mote content indexes of the second set of motes.**" (emphasis added) In contrast, Mulgund, at paragraph [0042] recites:

[0042] In another embodiment, the database logical design 19 further comprises a Data Table List 30 that provides a mapping between individual nodes 2 and the names of the tables used to store those nodes' Sensor Data. Each of these tables is defined and created dynamically, based on the structure of the information at each node. FIG. 4 illustrates an embodiment of a network model logical design 19 for a three-node network configuration wherein each of the three nodes (A, B, C) provides a different amount of data. As such a network is traversed and the Nodes Table 20 is populated, an entry is made in the Data Table List Table 30 that identifies the name of the table associated with a given node. In the example illustrated, each node (A, B, C) has its own Node Data Table (27A-C). Each of Node Data Table is defined to accommodate the type of sensor data known to originate from that node. As discussed earlier, it is assumed that the software agent on the database server can interrogate the node to determine what type of information it provides, and then define the table structures accordingly.



Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating the federated index from at least a part of one or more multi-mote content indexes of the second set of motes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 146, "creating the federated index from at least a part of one or more multi-mote content indexes of the second set of motes." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "creating the federated index from at least a part of one or more multi-mote content indexes of the second set of motes," as recited in claim 146. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 146. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 146 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

**38. Dependent Claim 147 Independently Patentable**

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 147 is patentable on its own merits.

Claim 147 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 147.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of motes;  
obtaining at least a part of a second-administered content index from a second set of motes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

Claim 147 recites:

147. The method of Claim 129, wherein said creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index further comprises:  
creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the second set of motes.

In support of the rejection, the Office action at page 10 recites:

As to claims 145 and 147, Mulgund shows all the elements, similar to claim 99, as discussed above.

In support of the rejection of claim 99, the Office action at page 9 recites:

As to claims 99 and 101, Mulgund shows creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-

addressed control index, or a mote-addressed routing/spatial index of the first (second) set of motes [visiting a node and retrieving the information stored at the node) (paragraphs [0007], [0026] lines 11-17, and [0062]).

Mulgund at paragraph [0007] recites:

[0007] In another aspect, the present invention is a method of database modeling that makes it possible to create, store, and update a virtual model of a network of sensors within a relational database structure. The network modeling agent dynamically updates various sensor node data and link data that collectively define an instantaneous "state" of the sensor network into the database logical design. The network modeling agent thereby facilitates access, visualization, and the use of a stream of information generated by the network of distributed sensors. The sensor nodes to be interrogated by the network modeling agent are assumed to be uniquely addressable and in communication, using networking protocols, with one another through links and with a database server through one or more access points. A method according to the present invention comprises the steps of discovering and maintaining the distributed sensor network topology by applying at every access point a quasi-recursive algorithm, which causes the network modeling agent to visit a first sensor node and mark the first node visited, push the marked first node onto a stack, and while the stack is non-empty, query the node at the top of the stack for a list of current links to the node at the top, compare the list of current links to a list of historical links to the node at the top of the stack and update the historical link and historical node information, and if there are no unmarked nodes reachable from a current link then pop the stack, otherwise visit the next reachable unmarked node, mark the next node and push it onto the stack. The network modeling agent builds the database model by updating relational database logical design tables at each step of the discovering step. The agent maintains the database model by periodically reapplying the interrogating algorithm, thereby updating the database model to account for sensor node and link additions and deletions. The periodicity of updates is preferably such that a near real-time topology of the sensor network is maintained.

Mulgund at paragraph [0062] recites:

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

Mulgund at paragraph [0026], lines 11-17, recites:

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Claim 147 recites, "creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the second set of motes."

In contrast, Mulgund, at paragraph [0007], [0062], and [0026] recites:

[0007] In another aspect, the present invention is a method of database modeling that makes it possible to create, store, and update a virtual model of a network of sensors within a relational database structure. The network modeling agent dynamically updates various sensor node data and link data that collectively define an instantaneous "state" of the sensor network into the database logical design. The network modeling agent thereby facilitates access, visualization, and the use of a stream of information generated by the network of distributed sensors. The sensor nodes to be interrogated by the network modeling agent are assumed to be uniquely addressable and in communication, using networking protocols, with one another through links and with a database server through one or more access points. A method according to the present invention comprises the steps of discovering and maintaining the distributed sensor network topology by applying at every access point a quasi-recursive algorithm, which causes the network modeling agent to visit a first sensor node and mark the first node visited, push the marked first node onto a stack, and while the stack is non-empty, query the node at the top of the stack for a list of current links to the node at the top, compare the list of current links to a list of historical links to the node at the top of the stack and update the historical link and historical node information, and if there are no unmarked nodes reachable from a current link then pop the stack, otherwise visit the next reachable unmarked node, mark the next node and push it onto the stack. The network modeling agent builds the database model by updating relational database logical design tables at each step of the discovering

step. The agent maintains the database model by periodically reapplying the interrogating algorithm, thereby updating the database model to account for sensor node and link additions and deletions. The periodicity of updates is preferably such that a near real-time topology of the sensor network is maintained.

[0062] The traversal process begins at node A 32. Node A 32 is visited and pushed onto the stack. The process of visiting a node involves retrieving the information stored at the node, and updating the local database.

[0026] FIG. 2 illustrates the nature of each of the sensing nodes 2, which comprise computational devices (possibly ranging in complexity from small embedded platforms to a fully-fledged PCs) that have one or more sensors 16 providing high-value information connected to it. The term sensor is used here in a general sense. A sensor 16 as contemplated herein could be as simple as an instrument that measures temperature, pressure, or any such other physical quantity. It could also be a device as complex as a video camera providing continuous full-motion imagery of some area of interest. In any case, the output of each of these sensors 16 is stored locally in a well-defined knowledge base 18, but the output can be accessed from outside the network 4 through some software application programming interface (API) and hardware implementation. Each of the sensing nodes 2 is additionally in communication with one or more other sensing nodes through connecting links 3.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the second set of motes." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 147, "creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the second set of motes." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "creating the federated index from at least a part of at least one of a mote-addressed sensing index, a mote-addressed control index, or a mote-addressed routing/spatial index of the second set of motes," as recited in claim 147. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 147. Therefore, Applicants

respectfully request that the Examiner hold Dependent Claim 147 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

### **39. Dependent Claim 148 Independently Patentable**

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 148 is patentable on its own merits.

Claim 148 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett et al. and in further view of Nelson (2004/0122849). Applicants respectfully traverse the rejection of claim 148.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of notes;  
obtaining at least a part of a second-administered content index from a second set of notes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

Claim 148 recites:

148. The method of Claim 129, wherein said creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index further comprises:  
generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries.

In support of the rejection, the Office action at page 15 recites:

As to claim 148, this claims has similar limitations as claim 102, discussed above.

In support of the rejection of claim 102, the office action at page 13 recites:

As to claim 102, Mulgund in view of Bennett shows all the elements except for generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries. Nelson shows generating the federated index [database table] to have one or more entries noting one or more respective administrative domains of one or more content index entries (abstract, Figs. 3A-3C, par. [0017]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries in order to limit a user access to documents in the database only to the user's own domain (abstract in Nelson).

Nelson in the Abstract recites:

In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

Nelson at paragraph [0017] recites:

[0017] FIGS. 3A-3C are database tables within a content management system that supports administrative domains.

Claim 148 recites, "generating the federated index to have one or more entries noting one or more respective **administrative domains of one or more content index entries.**" (emphasis added)

In contrast, Nelson at the Abstract and paragraph [0017] recites:



In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

[0017] FIGS. 3A-3C are database tables within a content management system that supports administrative domains.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Nelson or any other material included in Nelson with the recitation of claim 148, "generating **the** federated index to have one or more entries noting one or more respective **administrative domains of one or more content index entries.**" (emphasis added) Hence, the Office action fails to show how Nelson teaches or suggests, "generating the federated index to have one or more entries noting one or more respective administrative domains of one or more content index entries," as recited in claim 148. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 148. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 148 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation in the citations that support the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al., Bennett et al., and Nelson as required under *In re Sang Su Lee*:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 148, the Office action still fails to state a prima facie case of obviousness with respect to claim 148. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 148 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

#### **40. Dependent Claim 149 Independently Patentable**

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 149 is patentable on its own merits.

Claims 149 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. in view of Bennett et al. and in further view of Nelson (2004/0122849). Applicants respectfully traverse the rejection of claim 149.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of notes;  
obtaining at least a part of a second-administered content index from a second set of notes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

Claim 149 recites:

149. The method of Claim 129, wherein said creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index further comprises:  
generating the federated index to have access information to one or more content indexes for an administered content index.

In support of the rejection, the Office action at page 15 recites:

As to claim 149, this claims has similar limitations as claim 103, discussed above.

In support of the rejection of claim 103, the Office action at page 14 recites:

As to claim 103, Mulgund in view of Bennett shows all the elements except for generating the federated index to have access information to one or more content indexes for an administered content index.

Nelson shows generating the federated index [database table] to have access information [domain ID] to one or more content indexes for an administered content index (abstract, Figs. 3A-3C and 7, par. [0017]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by generating the federated index to have access information to one or more content indexes for an administered content index in order to limit a user access to documents in the database only to the user's own domain (abstract in Nelson).

Nelson in the Abstract recites:

In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

Nelson at paragraph [0017] recites:

[0017] FIGS. 3A-3C are database tables within a content management system that supports administrative domains.

Claim 149 recites, "generating the federated index to have access information to one or more content indexes for an administered content index."

In contrast, Nelson at the Abstract and paragraph [0017] recites:

In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a

user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

[0017] FIGS. 3A-3C are database tables within a content management system that supports administrative domains.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have access information to one or more content indexes for an administered content index." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Nelson or any other material included in Nelson with the recitation of claim 149, "generating the federated index to have access information to one or more content indexes for an administered content index." Indeed, although Nelson recites "administrative domains," none of the citations, including Nelson, recite, "administered content index," as recited in claim 149. Hence, the Office action fails to show how Nelson teaches or suggests, "generating the federated index to have access information to one or more content indexes for an administered content index," as recited in claim 149. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 149. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 149 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation in the citations that support the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al., Bennett et al., and Nelson as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 149, the Office action still fails to state a prima facie case of obviousness with respect to claim 149. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 149 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

#### **41. Dependent Claim 150 Independently Patentable**

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 150 is patentable on its own merits.

Claim 150 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 150.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of notes;  
obtaining at least a part of a second-administered content index from a second set of notes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

Claim 150 recites:

150. The method of Claim 129, wherein said creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index further comprises:  
generating the federated index to have information pertaining to a currency of at least one entry of an administered content index.

In support of the rejection, the Office action at page 10 recites:

As to claims 104 and 150, Mulgund shows generating the federated index to have information pertaining to a currency of at least one entry of an administered content index [timestamp status] (Figs. 3 and 4).

Mulgund at paragraph [0041], in describing Fig. 3 recites:

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates n well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by n individual

sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Claim 150 recites, "generating the federated index to have information pertaining to a currency of at least one entry of **an administered content index.**" (emphasis added)

In contrast, Mulgund et al. at paragraph [0041] recites:

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates n well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by n individual sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have information pertaining to a currency of at least one entry of an administered content index." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 150, "generating the federated index to have information pertaining to a currency of at least one entry of **an administered content index.**" (emphasis added) Further, Mulgund et al. fails to recite "an administered content index," as recited in claim 150. Hence, the Office action fails to show how Mulgund et



al. teach or suggest, "generating the federated index to have information pertaining to a currency of at least one entry of **an administered content index**," as recited in claim 150. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 150. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 150 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation in the citations that supports the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su - Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 150, the Office action still fails to state a prima facie case of obviousness with respect to claim 150. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 150 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

#### **42. Dependent Claim 151 Independently Patentable**

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 151 is patentable on its own merits.

Claim 151 was rejected under 35 U.S.C. 103(a) as being unpatentable over Mulgund et al. (2002/0161751) in view of Bennett et al. (U.S. Patent No.: 5,615,367). Applicants respectfully traverse the rejection of claim 151.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of nodes;  
obtaining at least a part of a second-administered content index from a second set of nodes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

Claim 151 recites:

151. The method of Claim 129, wherein said creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index further comprises:  
generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index.

In support of the rejection, the Office action at page 10 recites:

As to claims 105 and 151, Mulgund shows generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index [timestamp status] (Figs. 3 and 4, par. [0041]).

Mulgund at paragraph [0041], in describing Fig. 3 recites:

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates n well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by n individual

sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Claim 151 recites, "generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index. "

Mulgund at paragraph [0041], in describing Fig. 3 recites:

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates n well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by n individual sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 151, "generating the federated index to have information pertaining to an expiration of at least one entry of an administered

content index." Further, Mulgund et al. fail to recite "expiration," as recited in claim 151. Hence, the Office action fails to show how Mulgund et al. teach or suggest, "generating the federated index to have information pertaining to an expiration of at least one entry of an administered content index," as recited in claim 151. Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 151. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 151 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action fails to supply citation to a teaching, suggestion, or motivation that supports the combination of documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al. and Bennett et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 151, the Office action still fails to state a prima facie case of obviousness with respect to claim 151. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 151 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action provides no recitation as to the reasons for the obviousness of the combination, applicant concludes that the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2) the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

**43. Dependent Claim 152 Independently Patentable**

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 152 is patentable on its own merits.

Claim 152 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund et al. in view of Bennett et al. and in further view of Nelson (2004/0122849). Applicants respectfully traverse the rejection of claim 152.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of notes;  
obtaining at least a part of a second-administered content index from a second set of notes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

Claim 152 recites:

152. The method of Claim 129, wherein said creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index further comprises:  
generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes at least one of an ownership indicator, an access right indicator, an index refresh indicator, or a predefined policy indicator.

In support of the rejection, the Office action at page 15 recites:

As to claim 152, this claims has similar limitations as claim 106, discussed above.

In support of the rejection of claim 106, the Office action at page 14 recites:

As to claim 106, Mulgund in view of Bennett shows all the elements except for generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes an ownership indicator.

Nelson shows generating the federated index [database table] to have metadata pertaining to an administrative domain, wherein the metadata includes an ownership indicator (par. [0040], Fig. 3C).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes an ownership indicator in order to limit a user access to documents in the database only to the user's own domain (abstract in Nelson).

Nelson at paragraph [0040] recites:

[0040] A component table 64, held in the library server, is depicted in FIG. 3C. Each item stored in the content management system has a corresponding row in the component table 64. The row contains an item identifier 66 as well as metadata used to describe the item. For example, the component table contains an item type column 68 indicating the type of the item, a resource manager column 70 specifying the resource manager on which the item is recorded, and a collection ID column 72 indicating a storage collection on the resource manager in which the item is recorded. The component table is modified to include a domain ID column 74. The domain ID column specifies a domain with which the item is associated. For example, item A is associated with domain D3 and item B is associated with domain D4. The component table can include one or more other rows 76 with other attributes to describe the item.

Nelson at the Abstract recites:

In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

Claim 152 recites, "generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes at least one of an ownership indicator, an access right indicator, an index refresh indicator, or a predefined policy indicator."

In contrast, Nelson at paragraph [0040] recites:

[0040] A component table 64, held in the library server, is depicted in FIG. 3C. Each item stored in the content management system has a corresponding row in the component table 64. The row contains an item identifier 66 as well as metadata used to describe the item. For example, the component table contains an item type column 68 indicating the type of the item, a resource manager column 70 specifying the resource manager on which the item is recorded, and a collection ID column 72 indicating a storage collection on the resource manager in which the item is recorded. The component table is modified to include a domain ID column 74. The domain ID column specifies a domain with which the item is associated. For example, item A is associated with domain D3 and item B is associated with domain D4. The component table can include one or more other rows 76 with other attributes to describe the item.

And Nelson at the Abstract recites:

In a content management system, when a document is created, a system defined attribute for a domain is included as an attribute of the document. The content management system automatically extracts the domain associated with a user who created the document and inserts it into the domain field for the document. With this approach, it is not possible for an application program to incorrectly assign a domain to a newly created document, since the content management system automatically assigns the domain. Responses to requests by a user for access to documents within the content management system are filtered by a database view. The view is automatically selected based on the user's domain to limit access to items having the same domain as the user's domain. Accordingly, the user is provided access only to documents within the same domain as the user or in a public domain.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes at least one of an ownership indicator, an access right indicator, an index refresh indicator, or a predefined policy indicator." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from

Nelson or any other material included in Nelson with the recitation of claim 152, "generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes at least one of an ownership indicator, an access right indicator, an index refresh indicator, or a predefined policy indicator." Further, Nelson fails to recite "metadata" or "metadata pertaining to an administrative domain," as recited in claim 152. Hence, the Office action fails to show how Nelson teaches or suggests, "generating the federated index to have metadata pertaining to an administrative domain, wherein the metadata includes at least one of an ownership indicator, an access right indicator, an index refresh indicator, or a predefined policy indicator." Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 152. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 152 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action citation to Nelson fails to support the argument that the references supply a teaching, suggestion, or motivation to combine the documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al., Bennett et al., and Nelson as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 152, the Office action still fails to state a prima facie case of obviousness with respect to claim 152. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 152 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action's citation to the Abstract of Nelson fails to provide a teaching, suggestion or motivation to combine the references, Applicant's conclude the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2), the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation



to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

#### **44. Dependent Claim 153 Independently Patentable**

Notwithstanding its dependency from Independent Claim 129, Dependent Claim 153 is patentable on its own merits.

Claim 153 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mulgund et al. in view of Bennett and in further view of "TAG: a Tiny Aggregation Service for Ad-Hoc Sensor Networks" by Samuel Madden et al. Applicants respectfully traverse the rejection of claim 153.

Claim 129 recites:

129. A method comprising:  
obtaining at least a part of a first-administered content index from a first set of motes;  
obtaining at least a part of a second-administered content index from a second set of motes; and  
creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

Claim 153 recites:

153. The method of Claim 129, wherein said creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index further comprises:  
generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain.

In support of the rejection, the Office action at page 16 recites:

As to claim 153, this claims has similar limitations as claim 107, discussed above.

In support of the rejection of claim 107, the Office action at page 16 recites:

As to claim 107, Mulgund in view of Bennett shows all the elements except for having an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain.

Madden shows having an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain (abstract, section 1.1 the TAG Approach).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Mulgund in view of Bennett by having an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain in order produce updated content index (Mulgund, par. [0041]).

Madden at the Abstract recites:

We present the Tiny AGgregation (TAG) service for aggregation in TinyOS. TAG allows users to express simple, declarative queries and have them distributed and executed efficiently in networks of low-power, wireless sensors. We discuss various generic properties of aggregates, and show how those properties affect the performance of our in-network approach. We include a performance study demonstrating the advantages of our approach over traditional centralized, out-of-network methods, and discuss a variety of optimizations for improving the performance and fault-tolerance of the basic solution.

Madden at Section 1.1. recites:

### 1.1 The TAG Approach

We have developed Tiny AGgregation (TAG), a generic aggregation service for ad hoc networks of TinyOS motes. There are two essential attributes of this service. First, it provides a simple, declarative interface for aggregation, inspired by aggregation operators in database query languages. Second, it intelligently distributes and executes aggregation operators in the sensor network in a time and power-efficient manner, and is sensitive to the resource constraints and lossy communication properties of wireless sensor mote networks. TAG processes aggregates in network by computing over the data as it flows through the sensors, discarding irrelevant data and combining relevant readings into more compact records whenever possible. TAG operates as follows: users pose aggregation queries from a powered, storage-rich basestation.

Operators that implement the query are distributed into the network by piggybacking on the existing ad hoc networking protocol. Sensors mute data back towards the user through a routing tree rooted at the basestation. As data flows up

this tree, it is aggregated according to an aggregation function and value-based partitioning specified in the query. For example, consider the problem of counting the number of nodes in a network of indeterminate size. First, the request to count is injected into the network. Then, each leaf node in the tree reports a count of 1 to their parent; interior nodes sum the count of their children, add 1 to it, and report that value to their parent. Counts propagate up the tree in this manner, and flow out at the root.

Mulgund at paragraph [0041] recites:

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates n well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by n individual sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Claim 153 recites, "generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain."

In contrast, Madden at the Abstract, Madden at Section 1.1, and Mulgund at paragraph [0041] recites:

We present the Tiny AGgregation (TAG) service for aggregation in TinyOS. TAG allows users to express simple, declarative queries and have them distributed and executed efficiently in networks of low-power, wireless sensors. We discuss various generic properties of aggregates, and show how those properties affect the performance of our in-network approach. We include a performance study demonstrating the advantages of our approach over traditional centralized, out-of-network methods, and discuss a variety of optimizations for improving the performance and fault-tolerance of the basic solution.

## 1.1 The TAG Approach

We have developed Tiny AGgregation (TAG), a generic aggregation service for ad hoc networks of TinyOS motes. There are two essential attributes of this service. First, it provides a simple, declarative interface for aggregation, inspired by aggregation operators in database query languages. Second, it intelligently distributes and executes aggregation operators in the sensor network in a time and power-efficient manner, and is sensitive to the resource constraints and lossy communication properties of wireless sensor mote networks. TAG processes aggregates in network by computing over the data as it flows through the sensors, discarding irrelevant data and combining relevant readings into more compact records whenever possible.

TAG operates as follows: users pose aggregation queries from a powered, storage-rich basestation.

Operators that implement the query are distributed into the network by piggybacking on the existing ad hoc networking protocol. Sensors mute data back towards the user through a routing tree rooted at the basestation. As data flows up this tree, it is aggregated according to an aggregation function and value-based partitioning specified in the query. For example, consider the problem of counting the number of nodes in a network of indeterminate size. First, the request to count is injected into the network. Then, each leaf node in the tree reports a count of 1 to their parent; interior nodes sum the count of their children, add 1 to it, and report that value to their parent. Counts propagate up the tree in this manner, and flow out at the root.

[0041] FIG. 3 illustrates the simplest case, wherein each node 2 generates  $n$  well-defined sensor data signals. The composite primary key for the Sensor Data Table 24 is the identity of the Node Address and a Timestamp, followed by  $n$  individual sensor data outputs. This ensures that the only allowable entries are for known nodes, and that only one entry can be made per node at a given time instant. In this simple case, all Sensor Data is stored in the same Sensor Data Table 24. Each node may have a unique internal sampling rate, and the node itself may be sampled by the database server 10 at different rates; no assumptions are made about these operations. The relationship between this Sensor Data Table 24 and Nodes Table 20 illustrates why entries on individual nodes are not deleted from the Nodes table when they become unreachable: access to historical sensor data from past members of the network is preferred, even if those members are no longer present.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Madden et al. or any other material included in Madden et al. with the recitation of claim 153, "generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain." Further, Madden et al. fails to recite "domain-specific query string," as recited in claim 153. Hence, the Office action fails to show how Madden et al. teach or suggest, "generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain." Thus, the Office action fails to state a prima facie case of obviousness with respect to claim 153. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 153 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

Further, the Office action citation to Mulgund et al. fail to support the argument that the references supply a teaching, suggestion, or motivation to combine the documents. Thus, Applicants respectfully submit that the Office action points to no teaching, suggestion, or motivation in the cited material to combine the teachings of Mulgund et al., Bennett et al., and Madden et al. as required under In re Sang Su Lee:

It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Thus, assuming *arguendo* that the citations of the material set forth in the Office action teach or suggest the recitations of claim 153, the Office action still fails to state a prima facie case of obviousness with respect to claim 153. Therefore, Applicants respectfully request that the Examiner hold Dependent Claim 153 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

As the Office action's citation to the Mulgund et al. fails to provide a teaching, suggestion or motivation to combine the references, Applicant's conclude the Examiner is taking "official notice." If the Office maintains the rejection, under 37 C.F.R. 1.104(d)(2), the Examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. Thus, if the Office maintains the rejection, in the next communication applicant respectfully requests that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the conclusion that the combination is obvious.

#### **45. Independent Claim 179**

Claim 179 was rejected under 35 U.S.C. 102(b) as being anticipated by Mulgund et al. (2002/0161751). Applicants respectfully traverse the rejection of claim 179.

Claim 179 recites:

79. A system comprising:  
at least one computational system operably coupled with at least one of a first-administered set of motes or a second-administered set of motes; and  
at least one federated index creation agent resident in the computational system, said at least one federated index creation agent configured to create at least a part of a federated index.

In support of the rejection, the Office action at page 7 recites:

As to claim 179, Mulgund shows:  
at least computational system [database server (10)] operably coupled with at least one of a first-administered set of motes (Fig. 1); and  
at least one federated index creation agent resident in the computational system [network modeling agent (14)] (Fig. 1), said at least one federated index creation agent configured to create at least a part of a federated index [instantaneous state of the sensing network] (par. [0020] I. 17-20).

Mulgund at paragraph [0020] recites:

[0020] FIG. 1 illustrates the environment in which the present invention may be employed. Distributed sensing nodes 2 are connected to one another in a sensing network 4 through some kind of ad hoc networking protocol, with an attendant physical implementation (which may be wired or wireless). The topology of the network 4 is largely unconstrained, except that there exist a finite number of known access points 6 that comprise a bridge between the sensing network 4 and a conventional information technology (IT) infrastructure such as a corporate I AN 8. The access points 6 provide the means by which the information at each node 2 can be obtained from outside the network 4. The access points 6 may even be implicit; the sensing network 4 could just as easily be a peer-to-peer arrangement on a conventional TCP/IP network. On the I AN 8 is a database server 10 includes a network model database 12 and operates a network modeling



agent (NMA) 14. The NMA 14 is useful in creating a model of the instantaneous state of the sensing network 4. The model created is comprised of the following data elements:

Claim 179 recites, "at least one federated index creation agent resident in the computational system, said at least one federated index creation agent configured to create at least a part of a federated index."

In contrast, Mulgund et al. recite:

[0020] FIG. 1 illustrates the environment in which the present invention may be employed. Distributed sensing nodes 2 are connected to one another in a sensing network 4 through some kind of ad hoc networking protocol, with an attendant physical implementation (which may be wired or wireless). The topology of the network 4 is largely unconstrained, except that there exist a finite number of known access points 6 that comprise a bridge between the sensing network 4 and a conventional information technology (IT) infrastructure such as a corporate IAN 8. The access points 6 provide the means by which the information at each node 2 can be obtained from outside the network 4. The access points 6 may even be implicit; the sensing network 4 could just as easily be a peer-to-peer arrangement on a conventional TCP/IP network. On the IAN 8 is a database server 10 includes a network model database 12 and operates a network modeling agent (NMA) 14. The NMA 14 is useful in creating a model of the instantaneous state of the sensing network 4. The model created is comprised of the following data elements:

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "at least one federated index creation agent resident in the computational system, said at least one federated index creation agent configured to create at least a part of a federated index." Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 179, "at least one federated index creation agent resident in the computational system, said at least one federated index creation agent configured to create at least a part of a federated index." Further, Mulgund et al. fail to recite "at least one federated index creation agent resident in the computational system." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "at least one federated index creation agent resident in the computational

system, said at least one federated index creation agent configured to create at least a part of a federated index." Thus, the Office action fails to state a prima facie case of anticipation with respect to claim 179. Therefore, Applicants respectfully request that the Examiner hold Independent Claim 179 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

#### **46. Independent Claim 180**

Claim 180 are rejected under 35 U.S.C. 102(b) as being anticipated by Mulgund et al. (2002/0161751). Applicants respectfully traverse the rejection of claim 180.

Claim 180 recites:

180. A system comprising:  
at least one computational system operably coupled with at least one of a first-administered set of motes or a second-administered set of motes; and  
at least one federated index resident in the computational system, said at least one at least one federated index configured to contain at least a part of at least one of a mote-addressed content index or a multi-mote content index.

In support of the rejection, the Office action at page 7 recites:

As to claim 180, Mulgund shows:  
at least computational system [database server (10)] operably coupled with  
at least one of a first-administered set of motes (Fig. 1); and  
at least one federated index resident in the computational system (Figs. 3 and 4), said at least one federated index configured to contain at least a part of at least one of a mote-addressed content index (par. [0021] – [0024]).

Mulgund et al. at paragraphs [0021]-[0024] recite:

[0021] an identity (unique identifying information such as a numeric address) of each of the sensing nodes 2 in the network 4, as well as any metadata about each node;  
[0022] a connectivity of each of the sensing nodes 2; i.e., a structural representation of the network topology that could be used to reconstruct a diagram such as FIG. 1;  
[0023] an up-to-date information content at each of the sensing nodes 2; i.e., a real-time snapshot and time-history of the data of interest generated at each node location by an attached suite of sensors 16, as depicted in FIG. 2; and  
[0024] a history of the network 4 from the moment the model was first constructed, which would allow a reconstruction of the network's state at any time in the past.

Claim 180 recites, "at least one federated index resident in the computational system, said at least one at least one federated index configured to contain at least a part of at least one of a mote-addressed content index or a multi-mote content index."

In contrast, Mulgund et al. at paragraphs [0021]-[0024] recite:

[0021] an identity (unique identifying information such as a numeric address) of each of the sensing nodes 2 in the network 4, as well as any metadata about each node;

[0022] a connectivity of each of the sensing nodes 2; i.e., a structural representation of the network topology that could be used to reconstruct a diagram such as FIG. 1;

[0023] an up-to-date information content at each of the sensing nodes 2; i.e., a real-time snapshot and time-history of the data of interest generated at each node location by an attached suite of sensors 16, as depicted in FIG. 2; and

[0024] a history of the network 4 from the moment the model was first constructed, which would allow a reconstruction of the network's state at any time in the past.

Applicant respectfully points out that nowhere does the reference text cited by Examiner objectively recite: "at least one federated index resident in the computational system, said at least one at least one federated index configured to contain at least a part of at least one of a mote-addressed content index or a multi-mote content index. Furthermore, Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why one skilled in the art should equate the above quoted material from Mulgund et al. or any other material included in Mulgund et al. with the recitation of claim 180, "at least one federated index resident in the computational system, said at least one at least one federated index configured to contain at least a part of at least one of a mote-addressed content index or a multi-mote content index." Further, Mulgund et al. fail to recite "at last one federated index creation agent resident in the computational system." Hence, the Office action fails to show how Mulgund et al. teach or suggest, "at least one federated index resident in the computational system, said at least one at least one federated index configured to contain at least a part of at least one of a mote-addressed content index or a multi-mote content index." Thus, the Office action fails to state a prima facie case of anticipation with respect to claim 180. Therefore, Applicants respectfully request that the

Examiner hold Independent Claim 180 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

**C. Technical Material Cited by Examiner Does Not Show Recitations of Independent Claim 108 and Dependent Claims 109-128 and Independent Claim 154 and Dependent Claims 155-178 as Presented Herein; Notice of Allowability of Same Respectfully Requested**

Independent Claim 108 and Dependent Claims 109-128 are respective “means for” versions of Independent Claim 1 and Dependent Claims 2-21. Applicant respectfully points out that, with respect to “means for” claims, MPEP § 2182, *Scope of the Search and Identification of the Prior Art*, states that with respect to patentability examination of means for claims “the application of a prior art reference to a means or step plus function limitation requires that the prior art element perform the identical function specified in the claim.”

In view of these MPEP guidelines, Applicant respectfully suggests that the art of record does not establish a *prima facie* case of the unpatentability of Independent Claim 108 and Dependent Claims 109-128 for reasons analogous to those why such art does not establish a *prima facie* case of unpatentability of Independent Claim 1 and Dependent Claims 2-21 (e.g., since the functions of Independent Claim 108 are similar to the operations of Independent Claim 1, Examiner has not established a *prima facie* case that means performing the functions of Independent Claim 108 are taught in the art; other claims are like patentable by extension). Hence, Independent Claim 108 and Dependent Claims 109-128 are patentable for at least the reasons why Independent Claim 1 and Dependent Claims 2-21 are patentable. Accordingly, Applicant respectfully requests that Examiner hold Independent Claim 108 and Dependent Claims 109-128 patentable for at least the reasons as set forth related to Independent Claim 1 and Dependent Claims 2-21, and to thus issue a Notice of Allowability of same.

Independent Claim 154 and Dependent Claims 155-178 are respective “means for” versions of Independent Claim 129 and Dependent Claims 130-153. Applicant respectfully points out that, with respect to “means for” claims, MPEP § 2182, *Scope of the Search and Identification of the Prior Art*, states that with respect to patentability examination of means for claims “the *application* of a prior art reference to a *means* or step *plus function* limitation requires that the *prior art* element *perform* the *identical function specified in the claim*.”

In view of these MPEP guidelines, Applicant respectfully suggests that the art of record does not establish a *prima facie* case of the unpatentability of Independent Claim 154 and Dependent Claims 155-178 for reasons analogous to those why such art does not establish a *prima facie* case of unpatentability of Independent Claim 129 and Dependent Claims 130-153 (e.g., since the functions of Independent Claim 154 are similar to the operations of Independent Claim 129, Examiner has not established a *prima facie* case that means performing the functions of Independent Claim 154 are taught in the art; other claims are like patentable by extension). Hence, Independent Claim 154 and Dependent Claims 155-178 are patentable for at least the reasons why Independent Claim 129 and Dependent Claims 130-153 are patentable. Accordingly, Applicant respectfully requests that Examiner hold Independent Claim 154 and Dependent Claims 155-178 patentable for at least the reasons as set forth related to Independent Claim 129 and Dependent Claims 130-153, and to thus issue a Notice of Allowability of same.

#### **IV. ARGUMENT: CLAIMS 108-128 AND 154-178 ARE DIRECTED TOWARD STATUTORY SUBJECT MATTER**

Claims 108-128 and 154-178 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants respectfully traverse the rejection of claims 108-128 and 154-178.

In support of the rejection, the Office action at pages 3 and 4 recites:

As to claim 108, index creation agent and federated index creation agent appear to be a computer program (specification, page 8 last paragraph; page 27 second paragraph) (for the interpretation of means plus function language please refer to Claim Rejections - 35 USC § 112 section of the Office Action). A system comprising a computer program per se is not in one of the statutory categories.

As to claims 109-128, additional means for performing a function do not appear to introduce any tangible elements that would render a system of claim 108 statutory under 35 U.S.C. 101.

As to claim 154, federated index creation agent appears to be a computer program (specification, page 8 last paragraph; page 27 second paragraph) (for the interpretation of means plus function language please refer to Claim Rejections 35 USC § 112 section of the Office Action). A system comprising a computer program per se is not in one of the statutory categories.

As to claims 155-178, additional means for performing a function do not appear to introduce any tangible elements that would render a system of claim 108 statutory under 35 U.S.C. 101.

Claim 108 recites:

108. A system comprising:  
means for creating one or more first-administered content indexes for a first set of notes;  
means for obtaining at least a part of the one or more first-administered content indexes of the first set of notes;  
means for creating one or more second-administered content indexes for a second set of notes;  
means for obtaining at least a part of the second-administered content indexes of the second set of notes; and



means for creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

In support of the rejection of claim 108, the Office action at page 3 recites:

As to claim 108, index creation agent and federated index creation agent appear to be a computer program (specification, page 8 last paragraph; page 27 second paragraph) (for the interpretation of means plus function language please refer to Claim Rejections - 35 USC § 112 section of the Office Action). A system comprising a computer program *per se* is not in one of the statutory categories.

Thus, in support of the rejection of claim 108, the Office action recites, "index creation agent and federated index creation agent appear to be a computer program." However, at page 8, the specification recites, "in some implementations, such reporting entities are computer programs that execute on processors." Assuming *arguendo* that claim 108 includes a computer program, the specification clearly recites, "in some implementations, such reporting entities are computer programs that execute on processors." Computer programs that execute on processors have been found to be statutory subject matter on the grounds that the programs create a new computer. *In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1545 (Fed.Cir. 1944) (en banc) ("**We have held that such programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.**"). Thus, the grounds (i.e., "index creation agent and federated index creation agent appear to be a computer program") of the rejection set forth in the Office action fails to support a rejection of claim 108 under 35 U.S.C. § 101. As the rejection includes no other grounds for the rejection, the Office action fails to establish a *prima facie* case that claim 108 is directed to non-statutory subject matter. Therefore, Applicants request withdrawal of the rejection and reconsideration and allowance of claim 108. Accordingly, Applicants request that the Examiner issue of a Notice of Allowability on same.

Further, the Office action recites, "A system comprising a computer program *per se* is not in one of the statutory categories." Applicants respectfully submit that this is not a correct statement of the law. A system "comprising" a computer program may include other recitations and therefore may constitute patentable subject matter.

*In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1545 (Fed. Cir. 1994 (en banc)), is a case on point. Independent claim 15, the claim at issue in *In re Alappat*, was a "means plus function" claim similar in structure to Applicants' "means plus function" claim 108. In response to the argument that the claimed invention of *In re Alappat* covered a general purpose computer and was therefore not patentable subject matter, the Federal Circuit stated, "... a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software." The Federal Circuit further stated, "... a computer operating pursuant to software may represent patentable subject matter . . . ." Applicants' claim 108, like claim 15 of *In re Alappat*, is a "means plus function" claim that can convert a general purpose computer into a special purpose computer once the general purpose computer is programmed to perform the functions recited in the claims.

Further, Applicants' application, at pages 40-41 includes the following recitation:

... those skilled in the art will recognize that some aspects of the embodiments disclosed herein, in whole or in part, can be equivalently implemented in standard integrated circuits, as one or more computer programs running on one or more computers (e.g., as one or more programs running on one or more computer systems), as one or more programs running on one or more processors (e.g., as one or more programs running on one or more microprocessors)

...  
In a general sense, those skilled in the art will recognize that the various aspects described herein which can be implemented, individually and/or collectively, by a wide range of hardware, software, firmware, or any combination thereof can be viewed as being composed of various types of "electrical circuitry."  
Consequently, as used herein "electrical circuitry" includes, but is not limited to, electrical circuitry having at least one discrete electrical circuit, electrical circuitry having at least one integrated circuit, electrical circuitry having at least one application specific integrated circuit, electrical circuitry forming a general purpose computing device configured by a computer program (e.g., a general purpose computer configured by a computer program which at least partially carries out processes and/or devices described herein, or a microprocessor configured by a computer program which at least partially carries out processes and/or devices described herein).

Thus, under *In re Alappat*, claim 108 constitutes patentable subject matter. Therefore, Applicants request withdrawal of the rejection and reconsideration and allowance of claim 108. Accordingly, Applicants request that the Examiner issue of a Notice of Allowability on same.

In support of the rejection of claims 109-128, the Office action at page 3 recites:

As to claims 109-128, additional means for performing a function do not appear to introduce any tangible elements that would render a system of claim 108 statutory under 35 U.S.C. 101.

Claims 109-128 are dependent on claim 108. For reasons analogous to those stated above, Applicants request withdrawal of the rejections and reconsideration and allowance of claims 109-128.

Further, Applicants respectfully disagree with the recitation, "As to claims 109-128, additional means for performing a function do not appear to introduce any tangible elements that would render a system of claim 108 statutory under 35 U.S.C. 101." For example, claim 128 recites, "means for generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain." The Office action provides no support for conclusion that "means for generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain" does not introduce a tangible element. Therefore, the Office action fails to state a *prima facie* case under 35 U.S.C. § 101. Similarly, the Office action fails to provide support for its rejections of claims 109-127. Therefore, Applicants request withdrawal of the rejections and reconsideration and allowance of claims 109-128. Accordingly, Applicants request that the Examiner issue of a Notice of Allowability on same.

Claim 154 recites:

154. A system comprising:  
means for obtaining at least a part of a first-administered content index from a first set of notes;  
means for obtaining at least a part of a second-administered content index from a second set of notes; and  
means for creating a federated index from at least a part of the first-administered content index and at least a part of the second-administered content index.

In support of the rejection of claim 154, the Office action at page 4 recites:

As to claim 154, federated index creation agent appears to be a computer program (specification, page 8 last paragraph; page 27 second paragraph) (for the interpretation of means plus function language please refer to Claim Rejections 35 USC § 112 section of the Office Action). A system comprising a computer program per se is not in one of the statutory categories.

Thus, in support of the rejection of claim 154, the Office action recites, "index creation agent and federated index creation agent appear to be a computer program." However, at page 8, the specification recites, "in some implementations, such reporting entities are computer programs that execute on processors." Assuming *arguendo* that claim 154 includes a computer program, the specification clearly recites, "in some implementations, such reporting entities are computer programs that execute on processors." Computer programs that execute on processors have been found to be statutory subject matter on the grounds that the programs create a new computer. *In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1545 (Fed.Cir. 1944) (en banc). ("**We have held that such programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.**"). Thus, the grounds (i.e., "index creation agent and federated index creation agent appear to be a computer program") of the rejection set forth in the Office action fails to support a rejection of claim 154 under 35 U.S.C. § 101. As the rejection includes no other grounds for the rejection, the Office action fails to establish a *prima facie* case that claim 154 is directed to non-statutory subject matter. Therefore, Applicants request withdrawal of the rejection and reconsideration and

allowance of claim 154. Accordingly, Applicants request that the Examiner issue of a Notice of Allowability on same.

Further, the Office action recites, "A system comprising a computer program *per se* is not in one of the statutory categories." Applicants respectfully submit that this is not a correct statement of the law. A system "comprising" a computer program may include other recitations and therefore may constitute patentable subject matter.

*In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1545 (Fed. Cir. 1994 (en banc)), is a case on point. Independent claim 15, the claim at issue in *In re Alappat*, was a "means plus function" claim similar in structure to Applicants' "means plus function" claim 154. In response to the argument that the claimed invention of *In re Alappat* covered a general purpose computer and was therefore not patentable subject matter, the Federal Circuit stated, "... a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software." The Federal Circuit further stated, "... a computer operating pursuant to software may represent patentable subject matter ... ." Applicants' claim 154, like claim 15 of *In re Alappat*, is a "means plus function" claim that can convert a general purpose computer into a special purpose computer once the general purpose computer is programmed to perform the functions recited in the claims. Further, Applicants' application, at pages 40-41 includes the following recitation:

... those skilled in the art will recognize that some aspects of the embodiments disclosed herein, in whole or in part, can be equivalently implemented in standard integrated circuits, as one or more computer programs running on one or more computers (e.g., as one or more programs running on one or more computer systems), as one or more programs running on one or more processors (e.g., as one or more programs running on one or more microprocessors)

...  
In a general sense, those skilled in the art will recognize that the various aspects described herein which can be implemented, individually and/or collectively, by a wide range of hardware, software, firmware, or any combination thereof can be viewed as being composed of various types of "electrical circuitry."  
Consequently, as used herein "electrical circuitry" includes, but is not limited to, electrical circuitry having at least one discrete electrical circuit, electrical circuitry having at least one integrated circuit, electrical circuitry having at least one application specific integrated circuit, electrical circuitry forming a general purpose computing device configured by a computer program (e.g., a general

purpose computer configured by a computer program which at least partially carries out processes and/or devices described herein, or a microprocessor configured by a computer program which at least partially carries out processes and/or devices described herein).

Thus, under *In re Alappat*, claim 154 constitutes patentable subject matter. Therefore, Applicants request withdrawal of the rejection and reconsideration and allowance of claim 154. Accordingly, Applicants request that the Examiner issue of a Notice of Allowability on same.

In support of the rejection of claims 155-178, the Office action at page 3 recites:

As to claims 155-178, additional means for performing a function do not appear to introduce any tangible elements that would render a system of claim 108 statutory under 35 U.S.C. 101.

Claims 155-178 are dependent on claim 154. For reasons analogous to those stated above, Applicants request withdrawal of the rejections and reconsideration and allowance of claims 155-178. Accordingly, Applicants request that the Examiner issue of a Notice of Allowability on same.

Further, Applicants respectfully disagree with the recitation, "As to claims 155-178, additional means for performing a function do not appear to introduce any tangible elements that would render a system of claim 154 statutory under 35 U.S.C. 101." For example, claim 178 recites, "means for generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain." The Office action provides no support for conclusion that "means for generating the federated index to have an administrative domain-specific query string generated for or supplied by an administrative domain to produce an updated content index for that domain" does not introduce a tangible element. Therefore, the Office action fails to state a *prima facie* case under 35 U.S.C. § 101. Similarly, the Office action fails to provide support for its rejections of claims 155-177. Therefore, Applicants request withdrawal of the rejections and reconsideration and allowance of claims 155-178. Accordingly, Applicants request that the Examiner issue of a Notice of Allowability on same.

V. **ARGUMENT: CLAIMS 19, 36, 37, 45-47, 67, 84, AND 85 ARE NOT INDEFINITE UNDER 35 U.S.C. § 112, SECOND PARAGRAPH**

Claims 19, 36, 37, 45-47, 67, 84, and 85 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse the rejections of claims 19, 36, 37, 45-47, 67, 84, and 85.

In support of the rejection, the Office action at page 6 recites:

Claims 36, 37, 84, and 85 have similar limitations as claims 12, 13, 32, and 33 of the co-pending application 10/816,375 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 2, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the**

**applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular references or parts of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

### **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[c]laims 36, 37, 84, and 85 have similar limitations as claims 12, 13, 32, and 33 of the co-pending application 10/816,375 . . . ") and a plurality of claims are grouped together ("[c]laims 36, 37, 84, and 85 have similar limitations as claims 12, 13, 32, and 33 of the co-pending application 10/816,375 . . . "), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence,



Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 36, 37, 84, and 85 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

In support of the rejection of claims 19 and 67, the Office action at page 6 recites:

Claims 19 and 67 have similar limitations as claim 16 of the co-pending application 10/816,358 and therefore are rejected for the same reasons as provided in the Office Action mailed on August 14, 2007.

The rejection fails to meet the requirements of 35 U.S.C. § 132, 37 C.F.R. § 1.104(c)(2), MPEP § 707.07(d), and MPEP. § 707.07(g). Therefore, the rejection is improper and should be withdrawn.

35 U.S.C. § 132 recites:

Whenever, on examination, any claim for a patent is rejected or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such **information and references as may be useful in judging the propriety of continuing the prosecution . . . .** (emphasis added)

And 37 C.F.R. § 1.104 provides guidance as to "information and references as may be useful in judging the propriety of continuing the prosecution . . . . "

37 C.F.R. § 1.104(c)(2) recites:

In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. **When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable** The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (emphasis added)

As the Office action fails to designate the particular reference or parts of the references relied on in the rejection, the rejection fails to meet the requirements of 35 U.S.C. § 132 and 35 C.F.R. § 1.104(c)(2).

In addition, the Manual of Patent Examining Procedure at § 707.07(d) recites:

Where a claim is refused for any reason relating to the merits thereof it should be "rejected" and **the ground of rejection fully and clearly stated . . .**

#### **IMPROPERLY EXPRESSED REJECTIONS**

**An omnibus rejection of the claims "on the references and for the reasons of record" is stereotyped and usually not informative and should therefore be avoided.** This is especially true where certain claims have been rejected on one ground and other claims on another ground.

**A plurality of claims should never be grouped together in a common rejection,** unless that rejection is equally applicable to all claims in the group . . . . (emphasis added)

As the rejection includes an omnibus rejection ("[c]laims 19 and 67 have similar limitations as claim 16 of the co-pending application 10/816,358 . . . ") and a plurality of claims are grouped together ("[c]laims 19 and 67 have similar limitations as claim 16 of the co-pending application 10/816,358 . . . "), the ground of the rejection is not fully and clearly stated. Thus, the Office action fails to meet the requirements of MPEP § 707.07(d) directed to rejection of claims.

Finally, the Court of Customs and Patent Appeals has stated, "piecemeal examination is to be avoided." *In re Phillips* 608 F.2d 879 , 203 USPQ 971 (CCPA 1979). The rule of *In re Phillips* is imported into the Manual of Patent Examining Procedure at § 707.07(g). As the Office action fails to provide "information and references as may be useful in judging the

propriety of continuing the prosecution," the rejections are incomplete. Because the rejections are incomplete, the Applicants are unable to formulate a complete response at this time. Hence, Applicants' opportunity to formulate a complete response (i.e., a response that completely addresses the rejections) can only occur at some future time, if at all, which renders the examination process piecemeal. Thus, the Office action is improper for violating the rule against piecemeal prosecution adopted by the Court of Customs and Patent Appeals in *In re Phillips* and adopted by the United States Patent and Trademark Office in the Manual of Patent Examining Procedure at § 707.07(g).

Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 19 and 67 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

In support of the rejection of claims 45 and 93, the Office action at page 6 recites:

As to claims 45 and 93, it is ambiguous because it is unclear which of the established standards or protocols are being selected. The specification does not provide any example of hint of what these established standards or protocols could be which makes the claim indefinite.

Claims 45 and 93 recite, "selecting from one or more established standards or protocols."

Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why "established standards or protocols," as recited in claims 45 and 93, would be indefinite to one of ordinary skill in the art. Thus, the Office action fails to state a prima facie case of indefiniteness with respect to claims 45 and 93. Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 45 and 93 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

In support of the rejection of claims 46 and 94, the Office action at page 6 recites:

As to claims 46 and 94, it is ambiguous because it is unclear what is being claimed. It is not understood what identifier of which protocol or standard is being published and where it is being published. The specification is moot with respect to clarifying the meaning of the claim and/or relating the claimed limitations to the invention sought to be patented.

Claims 46 and 94 recite, "publishing at least a part of an identifier of the selected established standard or protocol."

Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why "publishing . . . established standard or protocol," as recited in claims 46 and 94, would be indefinite to one of ordinary skill in the art. Thus, the Office action fails to state a prima facie case of indefiniteness with respect to claims 46 and 94. Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 46 and 94 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

In support of the rejection of claims 47 and 95, the Office action at page 6 recites:

As to claims 47 and 95, it is ambiguous because it is unclear what is being encrypted. It appears that one or more of the established standards or protocols is being encrypted, which does not make any sense. The specification is moot with respect to clarifying the meaning of the claim.

Claims 47 and 95 recite, "wherein said established standards or protocols further comprises: encryption utilizing at least one of a private and a public key. "

Applicants respectfully submit that the Office action has supplied no text, reference, or knowledge explaining why "encryption utilizing at least one of a private and a public key ," as recited in claims 47 and 95, would be indefinite to one of ordinary skill in the art. Thus, the Office action fails to state a prima facie case of indefiniteness with respect to claims 47 and 95. Therefore, Applicants respectfully request that the Examiner hold Dependent Claims 47 and 95 patentable for at least the foregoing reasons, and issue a Notice of Allowability on same.

## **VI. ARGUMENT: OBJECTION TO THE ABSTRACT OF THE DISCLOSURE IS IMPROPER**

The Office action, at page 3, raises an objection to the abstract of the disclosure under MPEP § 608.01(b). Applicants respectfully traverse the objection to the disclosure.

Independent claim 1 recites:

1. A method comprising:
  - creating one or more first-administered content indexes for a first set of notes;
  - obtaining at least a part of the one or more first-administered content indexes of the first set of notes;
  - creating one or more second-administered content indexes for a second set of notes;
  - obtaining at least a part of the second-administered content indexes of the second set of notes; and
  - creating a federated index from at least a part of the one or more first-administered content indexes and at least a part of the one or more second-administered content indexes.

The abstract recites, "Methods and/or systems relating to mote networks having one or more indexes." Thus, the abstract includes recitations included in the independent claim. Hence, Applicants respectfully submit that the abstract permits one "to determine quickly . . . the nature and gist of the technical disclosure." Therefore, Applicants requests withdrawal of the objection.

## **VII. CLAIMS 8 AND 56 HAVE BEEN AMENDED TO OBVIATE THE REJECTIONS**

The Office action, at page 3, raises an objection to claims 8 and 56. Applicants have amended the claims as suggested in the Office action. Therefore, Applicants request withdrawal of the objection and reconsideration and allowance of claims 8 and 56.

## VIII. CONCLUSION

Applicant may have during the course of prosecution cancelled and/or amended one or more claims. Applicant notes that any such cancellations and/or amendments will have transpired (i) prior to issuance and (ii) in the context of the rules that govern claim interpretation during prosecution before the United States Patent and Trademark Office (USPTO). Applicant notes that the rules that govern claim interpretation during prosecution form a radically different context than the rules that govern claim interpretation subsequent to a patent issuing. Accordingly, Applicant respectfully submits that any cancellations and/or amendments during the course of prosecution should be held to be tangential to and/or unrelated to patentability in the event that such cancellations and/or amendments are viewed in a post-issuance context under post-issuance claim interpretation rules.

Insofar as that the Applicant may have during the course of prosecution cancelled/amended claims sufficient to obtain a Notice of Allowability of all claims pending, Applicant may not have during the course of prosecution explicitly addressed all rejections and/or statements in Examiner's Office Action. The fact that rejections and/or statements may not be explicitly addressed during the course of prosecution should NOT be taken as an admission of any sort, and Applicant hereby reserves any and all rights to contest such rejections and/or statements at a later time. Specifically, no waiver (legal, factual, or otherwise), implicit or explicit, is hereby intended (e.g., with respect to any facts of which Examiner took Official Notice, and/or for which Examiner has supplied no objective showing, Applicant hereby contests those facts and requests express documentary proof of such facts at such time at which such facts may become relevant). For example, although not expressly set forth during the course of prosecution, Applicant continues to assert all points of (e.g. caused by, resulting from, responsive to, etc.) any previous Office Action, and no waiver (legal, factual, or otherwise), implicit or explicit, is hereby intended. Specifically, insofar as that Applicant does not consider the cancelled/unamended claims to be unpatentable, Applicant hereby gives notice that it may intend to file and/or has filed a continuing application in order prosecute such cancelled/unamended claims.

While particular aspects of the present subject matter described herein have been shown and described, it will be apparent to those skilled in the art that, based upon the teachings herein, changes and modifications may be made without departing from the subject matter described herein and its broader aspects and, therefore, the appended claims are to encompass within their scope all such changes and modifications as are within the true spirit and scope of the subject matter described herein. Furthermore, in those instances where a convention analogous to “at least one of A, B, and C, etc.” is used, in general such a construction is intended in the sense one having skill in the art would understand the convention (e.g., “a system having at least one of A, B, and C” would include but not be limited to systems that have A alone, B alone, C alone, A and B together, A and C together, B and C together, and/or A, B, and C together, etc.). In those instances where a convention analogous to “at least one of A, B, or C, etc.” is used, in general such a construction is intended in the sense one having skill in the art would understand the convention (e.g., “a system having at least one of A, B, or C” would include but not be limited to systems that have A alone, B alone, C alone, A and B together, A and C together, B and C together, and/or A, B, and C together, etc.). It will be further understood by those within the art that virtually any disjunctive word and/or phrase presenting two or more alternative terms, whether in the description, claims, or drawings, should be understood to contemplate the possibilities of including one of the terms, either of the terms, or both terms. For example, the phrase “A or B” will be understood to include the possibilities of “A” or “B” or “A and B.”

With respect to any cancelled claims, such cancelled claims were and continue to be a part of the original and/or present patent application(s). Applicant hereby reserves all rights to present any cancelled claim or claims for examination at a later time in this or another application. Applicant hereby gives public notice that any cancelled claims are still to be considered as present in all related patent application(s) (e.g. the original and/or present patent application) for all appropriate purposes (e.g., written description and/or enablement). Applicant does NOT intend to dedicate the subject matter of any cancelled claims to the public.



The Examiner is encouraged to contact the undersigned by telephone at (952) 876-4093 to discuss the above and any other distinctions between the claims and the applied references, if desired. Also, if the Examiner notes any informalities in the claims, he is encouraged to contact the undersigned to expediently correct such informalities.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Danny Padys", is written over a horizontal line.

Danny Padys  
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Registration No. 35,635

DJP/lkm

Enclosures:

Postcard  
Check  
Petition for Extension of Time  
Post-Filing Transmittal

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